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February 5, 2010

Via Hand Delivery & U.S. Mail

RECEIVED
FEB 05 2010
COMMUNITY DEVELOPMENT
CPA2009-00001

Mr. Brandon Dunn
Development Review Representative
Department of Community Development
Division of Planning
Lee County Government
P.O. Box 398
Ft. Myers, Florida 33902-0398

Re: Sufficiency Response CPA2009-01 – Alico West Lee Plan Amendment

Dear Mr. Dunn:

Thank you for your letter dated January 14, 2010 requesting additional information relative to the Alico West Lee Plan Amendment CPA2009-01. In response, this letter provides the requested additional information and is organized based upon the outline of your request.

1. Request: Part II A. - Please indicate (list) the Map numbers that are proposed to be amended.

Response: Part II A. - The following map numbers are proposed to be amended:
Map # 1 – Future Land Use
Map # 6 – Future Water Service Areas, Lee County Utilities
Map # 7 – Future Sanitary Service Areas, Lee County Utilities

2. Request" Part III E.2. - RESIDENTIAL: . . ., the application does not state the density on the Alico West site as required. Policy 1.1.9 also requires that the clustered density on any one site does not exceed 15 dwelling units per acre.

Response: Part III E.2 – Within the executive summary of our application, we provided a chart which shows the following:

UNIVERSITY COMMUNITY ACREAGE/DENSITY ANALYSIS

	Acreage	Density	Total Units
Current Univ. Comm.	2604 ac.	2.5 u/g/ac	6510 units
Univ.Comm. including Alico West proposed CPA	3523.5 ac	1.85u/g/ac	6510 units

The applicant recognizes that Policy 1.1.9 of the Lee Plan establishes the requirement that the overall average density for the University Village must not exceed 2.5 units per gross acre over the entire University Village area and can be clustered at up to 15 units per net acre on individual parcels. This density is already anticipated by the Lee Plan, as it is allocated specifically to the University Village area and can be developed at any time. Based on Lee County GIS data, there are currently 2,604 acres within the University Village designation, equating to a total permitted units count of 6,510 units (2604 X 2.5) across this land use designation.

As stated in the application, there is no request for "new or additional" density but, rather, it is a request to increase the total acreage of the University Community. As stated above, the current acreage within the University Community is 2,604 acres and, when multiplied by a gross density of 2.5 units per acre, yields a total maximum unit count of 6,510 units. This application increases the overall acreage by 919.5 acres to a total of 3,523.5 acres while not increasing the total unit count, thereby resulting in a new overall gross density for the University Community of 1.85 units per gross acre. As a consequence, this application will result in an actual reduction in the gross density within the University Community.

You have also requested that the application provide the gross density being proposed to be built on the Alico West property. With the approval of this amendment, the density will be 2.12 units per acre as we are requesting a maximum of 1,950 units to be developed on the 919.5 acres of Alico West property.

The current University Community boundary contains 2604 acres with an allowable gross density of 2.5 units per acre which yields 6510 units. County records document that 3200 units have been permitted/entitled to date. Therefore, 3310 units remain unassigned/un-entitled. This application requests placement of a maximum of 1950 of the available 3310 units on the Alico West property leaving 1360 units unassigned in the University Community.

It is duly acknowledged that Policy 1.1.9 requires that clustered density on any one site does not exceed 15 dwelling units per acre. We further acknowledge that this requirement is applicable to this Comprehensive Plan Amendment and that, at the time of DRI/PUD application, we will be required to adhere to that maximum clustered density of 15 dwelling units per acre.

3. Request: Part III E.2. – RESIDENTIAL: Please clarify, are all of the proposed 1,950 requested units proposed to be multifamily units?

Response: Part II E.2. – All 1,950 requested units are currently anticipated to be multifamily units. However, the final determination will occur at the time of DRI/PUD application and will be based upon market demographics, university related uses and the best application for creating a University Multi-Use Town Center.. The applicant proposes that we utilize an equivalency matrix based upon transportation trip generation. This will

establish the maximum number of trips which can be produced from these 1,950 multiple family units or other product types based upon their equivalent trip generation. Should clustered units be proposed as part of the DRI/PUD, the equivalency matrix will be utilized to adjust the total number of units permitted on the property. It is reasonable to assume that all clustered units will be on a small lot profile and developed at a density of 5 or more units per acre.

4. Request: Part III E.2. – COMMERCIAL: The amount of non-residential acres is not identified in the application. Please establish an actual maximum commercial floor area or place a limit on the amount of non-residential acres. How are mixed use areas calculated where there may be both residential and commercial uses integrated in a vertical design?

Response: Part III E.2. –

150 acres of non-resident plus 40 acres dedicated to the University which may be comprised of residential and non-residential uses in direct support of FGCU.

For the multi-use/mixed-use calculations, the retail and office uses will be calculated and credited against the maximum square footage established above. The residential units which may be built in a multi-use/mixed-use building shall be credited towards the maximum number of residential units on the property (1950 units).

5. Request: Part IV A.3. – The FLUCCS Map identifies wetlands on the subject site. These are required to be identified on the proposed Future Land Use Map.

Response: Part IV A.3 – With the exception of the wetlands along the eastern property boundary and the wetlands within the southern tip of the project site, all wetlands will be impacted by the proposed development. There will be a total of 35.8 acres of low quality wetlands impacted. These are melaleuca dominated wetlands. The Future Land Use Map has been updated to accurately depict the wetlands to remain outside of the proposed Alico development.

6. Request: Part IV A.7. – . . ., the owner of the subject parcels is Alico Agri, Ltd; however, the application identifies the property owners as Alico Land Development, Inc. Please clarify.

Response: Part IV A.7. – Alico-Agri, Ltd. is the title holder and owner of Alico West. Steven M. Smith is President of Alico-Agri, Ltd. Alico Land Development, Inc. is the applicant, with Donald R. Schrotenboer as President.

An affidavit has been prepared and is attached from Alico-Agri, Ltd. authorizing Donald R. Schrotenboer and Alico Land Development, Inc. to be the agent, and further authorizing the filing of this application on behalf of Alico-Agri, Ltd.

7. Request: Part IV B.1. – . . . Traffic Study is based on "conservative assumptions." Is the applicant proposing greater commercial intensities than shown in these portions of the application? Please provide a Traffic Study that is based on the worst case scenario.

Response: Part IV B.1. – David Plummer & Associates conducted the traffic analysis relative to CPA2009-01, Alico West Lee Plan Amendment. By letter dated January 21, 2010, Ron Talone of Plummer & Associates has responded to this sufficiency item. His response states the following:

DPA acknowledges that the land uses utilized in the Traffic Study represent the maximum development potential of the property resulting from the proposed CPA. DPA assumed full build-out of those uses by 2030. Therefore, the Traffic Study (dated August 4, 2009) analyzed the "worst case" scenario from a traffic perspective.

A copy of Mr. Talone's letter is attached.

8. Request: Part IV B.2. – The application states that the proposed floor area used in the Public Facilities Impact Analysis is based on "conservative assumptions." Is the applicant proposing greater commercial intensities than shown in these portions of the application? Please provide a Public Facilities Impact Analysis that is based on the worst case scenario.

Response: Part IV B.2. – The term "conservative assumptions" was not intended to reflect a "lower potential calculation," but was, rather, intended to mean that we took the highest intensity potential development of the property that we are requesting, which translates to the worst case scenario. The numbers contained in the Public Facilities Impact Analysis are based upon, what we believe, will be the maximum build-out and, therefore, represent the worst case scenario.

9. Request: Part IV B.3.a. – Please provide a letter from the San Carlos Fire District addressing adequate response times.

Response: Part IV B.3.a. – A letter from the San Carlos Fire District is attached.

10. Request: Part IV B.3.e. – The letter provided from the Lee Tran office stated that the proposed Alico West development would "hamper the TDP recommendation of improved headways. This type of development would be better served by a different type of service such as a local circulator." The letter also states... "Please send an indication that these issues have been resolved with Lee Tran."

Response: Part IV B.3.e. – *Response* – Within Section 9 of the Alico application, the applicant has addressed Policy 18.1.5 of the Lee Plan. This policy states "Site design within the University Community must utilize alternative modes of transportation, such as

pedestrian networks, mass transit opportunities, sidewalks, bike paths, and similar facilities.

In addressing this policy, the applicant has stated the following:

- Development will create a balanced mixture of uses intended to reduce overall trip lengths, to support pedestrian, bicycle and transit opportunities, and create pedestrian-friendly streets.

- The concept plan calls for outdoor livability, including interconnected pedestrian and bike facilities, walkways, public plazas, street furniture, and walkable block size.

- The development will encourage pedestrian and bicycle-friendly access with access to the development and the surrounding community.

- Existing Lee Tran routes can be extended to the subject property.

- The FGCU Campus Eagle Express Shuttle can provide transit opportunities within the University Community.

- The lake presents an opportunity for a future water taxi service.

By email dated January 29, 2010, Mr. Horsting has agreed that the FGCU Eagle Express will function as a local circulator and that the concern of Lee Tran is now addressed.. As such , the applicant has complied with the request of Lee Tran. An easement connecting FGCU with the Alico University Community project will create the connection from the FGCU campus to the site and will be the route upon which the Eagle Express will operate. This will fulfill the requirement for and goal of a local circulator as requested by Mr. Horsting. Furthermore, the easement will be constructed to permit both vehicular traffic and a multi-modal path which can be used by cyclists and/or pedestrians.

11. Request: Part IV C.3. – Please provide a topographic map depicting the property boundaries and the 100-year flood prone areas.

Response: Part IV C.3. – A USGS topographic map is attached, depicting the subject property. There are no areas subject to the 100 year floods.

12. Request: Part IV C.4. – Please provide a map delineating the property boundaries on the Flood Insurance Rate Map (FIRM) effective August 2008.

Response: Part IV C.4. – A map is attached showing the subject property and the corresponding FIRM panel. The parcel is located in community 125124, panel 582 and map 12071C0582F. The parcel is located in a flood zone 'X".

13. Request: Part IV D.2. – Please provide a map that identifies the subject site on the archeological sensitivity map for Lee County.

Response: Part IV D.2. – A map is attached depicting the subject property on the Archeological Sensitivity Map.

14. Request: Part IV E.2. – To ensure the design of the proposed development will enhance the neighboring university and benefit the surrounding communities as required by Policy 1.1.9 and Objective 18.1 of the Lee Plan. Lee County Planning staff believes that . . . additional design parameters must be established. These design parameters should include, but are not limited to, characteristics such as maximum size of residential units, mix of leasable and for sale units, mix of residential unit types, pedestrian friendly design, appropriate mix of commercial retail uses, and design of commercial/mix use buildings. . . .these and other design criteria should be negotiated as part of a cooperative master planning effort including the property owner, Florida Gulf Coast University, and Lee County.

Response: Part IV E.2. – The development will be based upon a walkable design with interconnected streets, clustered residential, multi use paths, and an integrated land use theme which is functionally oriented to facilitate the goal of a University Community. The design will create an uninterrupted multi-modal pedestrian/bike/vehicular connection between and among the uses associated with FGCU on the Alico West site and the FGCU campus. A requirement of the University Community is that all development occur as a Development of Regional Impact and that rezonings must be in the form of a Planned Development. It is agreed that the items enumerated in this request for additional information will be addressed during the DRI/PD application review. It is further acknowledged that, as the applicant proceeds with the design of these items, a cooperative master planning effort will occur between the property owner, developer, Florida Gulf Coast University, and Lee County staff.

15. Request: Part IV F.3 and F.4. – Please review the above mentioned policies and provide the required analysis.

Response: Part IV F.3 and F4. – The following language has been added to the Lee Plan consistency document.

POLICY 2.4.2: *All proposed changes to the Future Land Use Map in critical areas for future potable water supply (Bonita Springs as described in Policy 1.7.10; Lehigh Acres as described in Policy 54.1.9; and all land in the Density Reduction/ Groundwater Resource land use category) will be subject to a special review by the staff of Lee County. This review will analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water sources, and will assess whether the proposed land uses would cause any significant impact on present or future water resources. If the Board of County Commissioners wishes to approve any such changes to the Future Land*

Use Map, it must make a formal finding that no significant impacts on present or future water resources will result from the change.
(Amended by Ordinance No. 92-47, 94-30, 00-22, 02-02)

Policy 2.4.2 requires the Lee County Board of Commissioners to make a formal finding that no significant impacts to present or future water resources will result from a land use change in the DRGR. The policy also requires Lee County staff to perform a review of the availability of irrigation and domestic water sources, and the effect of the request on those resources, as specified in Policy 2.4.3. below.

POLICY 2.4.3: *Future Land Use Map Amendments to the existing DR/GR areas south of SR 82 east of I-75, excluding areas designated by the Port Authority as needed for airport expansion, which increase the current allowable density or intensity of land use will be discouraged by the county. It is Lee County's policy not to approve further urban designations there for the same reasons that supported its 1990 decision to establish this category. In addition to satisfying the requirements in 163 Part II Florida Statutes, Rule 9J-5 of the Florida Administrative Code, the Strategic Regional Policy Plan, the State Comprehensive Plan, and all of the criteria in the Lee Plan, applicants seeking such an amendment must:*
1. analyze the proposed allowable land uses to determine the availability of irrigation and domestic water sources; and,
2. identify potential irrigation and domestic water sources, consistent with the Regional Water Supply Plan. Since regional water suppliers cannot obtain permits consistent with the planning time frame of the Lee Plan, water sources do not have to be currently permitted and available, but they must be reasonably capable of being permitted; and,
3. present data and analysis that the proposed land uses will not cause any significant harm to present and future public water resources; and,
4. supply data and analysis specifically addressing the urban sprawl criteria listed in Rule 9J- 5.006(5) (g), (h), (i) and (j), FAC.
During the transmittal and adoption process, the Board of County Commissioners must review the application for all these analytical requirements and make a finding that the amendment complies with all of them. (Added by Ordinance No. 97-05)

The proposed land uses for the subject property, retail, residential, office and university related development, have been evaluated for water use and that calculation is included in the Public Facilities Analysis attached to the application. In addition, this application requests amendments to the Lee County Utilities Water and Sanitary Sewer Service areas (Lee Plan Maps 6 & 7) to incorporate the entire subject property. At this time, the northern portion of the subject property is located within the water service franchise area; however the sanitary sewer service area ends at the subject property's north property line. The service area boundaries currently exclude the former mining area; creating "a hole" in the service area. The amendment would move both service area boundaries to the project's south property line, providing for a uniform, compact service area boundary. A review of the Lee County Concurrency Report indicates that sufficient water and sewer capacity is available through Lee County Utilities, which was confirmed in an availability letter attached to the original application. Therefore because the project will connect to

a sanitary sewer system and public water system, there will no adverse impact to future public water resources, due to additional impacts created by this project.

A review of Lee Plan Map 8, Well Field Cones of Influence indicates the subject property is not located within close proximity to any permitted public water supply wells. The closest plant is the Three Oaks plant and a very small portion of the westernmost uplands on the subject property fall within the Ten Year Travel Time for that Cone of Influence, pursuant to Map 8. Remnants of the mining operation will be removed with the change in land use, including the "fines by-product" created by the mine. A detailed description of the existing conditions on site is included in the attached geotechnical investigation report from CDM. The report contains information on existing subsurface conditions, as well as an investigation of the mining residue (fines) found over a significant portion of the site. The thickness of the residue to be excavated ranges from 8.5' to 69.5' deep in the test borings contained in the report. A storm water management system will be installed, and compliance with well field protection regulations will insure enhanced water quality for surface water and groundwater leaving the site, providing for no adverse impacts to public water resources, per Policy 2.4.3., above.

Lee County Utilities does not have reuse lines in this area; therefore irrigation will utilize the existing on-site lake. The existing lake will provide the irrigation volume necessary to sustain a Florida native based landscape design. In addition the Florida native design featuring drought tolerant landscaping, will require less lawn maintenance and reducing energy consumption. Lastly, no water usage will occur as a result of the mining operation, reducing the sites overall consumption.

16. Miscellaneous Comment 1. – Please clarify wetland impacts.

Response: Miscellaneous Comment 1 – As outlined on page 15 of the Environmental Supplement, the project will implement Best Management Practices (BMPs) to insure protection of water quality and preserved wetlands. This includes appropriate sedimentation and erosion controls which prevent siltation into the existing lake and into wetlands located outside the subject property.

Page 16 of the Environmental Supplement has been revised to clarify which wetlands will be impacted by the proposed development and which wetlands will be maintained outside the limits of development. There will be an impact to 35.8 acres of low quality wetlands which are heavily infested with melaleuca. No impacts to wetlands within the proposed future CR 951 right-of-way are proposed. Please find enclosed revised text and accompanying exhibit identifying wetland impact areas.

17. Miscellaneous Comment 2 – Please notice that the northeastern-most portion of the proposed Alico West development is within the FAA's 10,000 boundary as addressed in the FAA Advisory Circular to the Southwest Florida International Airport. Plantings and storm water features in theis area must be designed to discourage birds from feeding and roosting.

Response: Miscellaneous Comment 2 – The applicant acknowledges this requirement, which will be addressed and documented at the time of the DRI/PD application.

18. Miscellaneous Comment 3 – Please note that at the time of zoning the applicant must provide a preliminary multi-objective water management plan addressing the proposed restoration for water quality and ground water recharge for the area that will remain undeveloped (wetlands and borrow pit) to minimize the loss of DR/GR land in compliance with Policy 1.1.9 and Policy 18.1.9

Response: Miscellaneous Comment 3 – The requirements of Policy 1.1.9 and Policy 18.1.9 are duly notes and will be addressed at the time of DRI/PD application. Four monitoring wells are present on site as part of the environmental remediation program. They have been on site for more than 2 years.

19. Miscellaneous Comment 4 – . . . the applicant must remove berms and restore the hydrological connection to the Estero River watershed in compliance with ZAB 86-62. Please provide documentation that reclamation has occurred and is complete.

Response: Miscellaneous Comment 4 – ZAB 86-62 required removal of the haul road related to Phase II-A (condition n), and reclamation in accordance with Florida Rock's Site Development and Reclamation Plan (condition o). These items have been completed. The Reclamation Plan required berms and ditches be backfilled and returned to natural grade as described below.

The existing north berm (along Alico Road) still remains in place but will be removed to allow development to occur. The berm along the eastern boundary will be reworked to comply with SFWMD criteria for construction of surface water management systems. The haul road within and adjacent to the southern tip of the project area has been removed, the area regraded and replanted. The remaining portions of the berm within this southeastern area will be reworked and relocated as necessary to accommodate the proposed future FGCU facilities development while retaining the wetlands outside the development limits, contiguous with Stewart Cypress Slough.

20. Miscellaneous Comment 5 – Please provide additional information concerning how the "fines" that exist onsite will be disposed of or otherwise handled.

Response: Miscellaneous Comment 5 – The applicant contracted with CDM to conduct a study of the fine material and to make specific recommendations. The purpose of addressing the fines is to ensure that liability issues are eliminated to a reasonable degree and that the developed property is isolated from contact with the fine material. It is proposed to accomplish this using two techniques:

The first technique would be to dredge the material immediately adjacent to the proposed development site and relocate this dredge material to the bottom of the existing lake or

relocate it to one of the adjacent lakes. Turbidity and settlement studies have been conducted by CDM, and they have verified that the placement of this fine material in the proposed locations would result in the settlement of the fine material and the elimination of turbidity issues.

The second technique would be to create an island of fine material and to restore it into a bird rookery. Discussions have occurred with FGCU on the potential of utilizing their environmental staff and students to design this rookery island, thereby incorporating it into the overall FGCU University Community/University education experience.

The CDM study is dated June 2009, and summary information from that study includes the following:
-Turbidity test show that the material will settle to the bottom of a lake area in a reasonable time.
-Once placed at the bottom of a lake, currents, wind and recreational boat use will not cause it to become unsettled.
-The removal of the material can be accomplished by using a small dredge and pipe the material to the lake.
-There is more material in the fine deposits than the lake should be asked to accommodate. Therefore, alternatives should be explored.
-The mining residue consists primarily of fine sand with lesser amounts of silt and clay
-The fine sand could be used for structural fill
-A method to separate the fine sand from the fines can be used during the removal of the material.

It is important to note that no remediation is required for this site as the former mine operated under permits that predated mandated or stipulated remediation. By initiating this application, the landowner seeks to remediate the property that restores environmental integrities within the site while promoting a better, more productive land use for the community and for FGCU.

21. Miscellaneous Comment 6 – Please clarify what uses are planned for the shared lake.

Response: Miscellaneous Comment 6 – The shared lake will be utilized in a combination of fashions, including water management, recreation, and environmental activities. The connection between the Miromar Lake to the south and the lake contained within this application has previously been permitted.

22. Miscellaneous Comment 7 – The Extension of County Road 951 plays an integral part in the proper functioning of the proposed development. However, this is currently not programmed nor is there funding available for is construction. Is the applicant proposing to construct the adjacent segment of County Road 951 from Alico Road to a connection with the Florida Gulf Coast University?

Response: Miscellaneous Comment 7 – The proposed 951 roadway does not play an integral part in the proposed development. The conceptual master plan is developed on the premise that an internal road system will be created from Alico Road, through the proposed development, and enters FGCU at the southeast corner of the subject property. While the Comprehensive Plan Amendment does include a portion of the proposed 951 corridor, the conceptual master plan will not be dependent upon, nor will it be part of, the 951 proposed corridor. The conceptual plan does call for two connections onto 951 when and if it is constructed.

Response to Comments by County Attorney

By memorandum dated January 26, 2010, Chief Assistant County Attorney Donna Marie Collins provided to Brandon Dunn of the Planning Division nine additional comments. The applicant's response to these nine items is shown below:

CA-1: Acreage Breakdown Discrepancy – Project description of acreage should be consistent throughout the application material.

Response – The applicant concurs and is providing you with the following information regarding acreage. The total acreage covered by the Comprehensive Plan Amendment is 919.5 acres. Prior to any mining of the property which created the existing lakes, the aerials shows that, of the 919.5 acres, 855.8 acres were uplands and 63.7 acres were wetlands. The Lee Plan recognizes that, while lakes may be excavated, the upland/wetland designation prior to excavation must be identified. Current conditions on the property show that of the 919.5 acres, approximately 569 acres are now lakes with the remainder of 350 acres being land which was never excavated. The narrative states "Of the total site, approximately 350 acres were never mined, while the remainder of the site resulted in uplands being excavated and a lake being created." It was not the intention of this statement to infer that all 350 acres remaining are upland. The document further specifies the current acreage which is upland and the current acreage which is wetland.

CA-2: Legal Description – Verify that the legal description provided accurately depicts 919 acres and that it closes.

Response – Mark Haines, Professional Licensed Surveyor and Mapper with WilsonMiller, was responsible for the preparation of the legal description for this project. Mr. Haines has reviewed the legal description and has confirmed that it properly depicts 919.5 acres and that it closes. Furthermore, Mr. Haines has called Chick Jakacki of the County staff to review the matter with him.

CA-3: Proposed Text Changes – Replace all references to Tree Line Avenue with Ben Hill Griffin Parkway.

Response - Policy 18.2.3 has been revised accordingly.

CA4: Map Amendment – ". . . a unified plan of development over the non-university related parcels. . . . all development must be reviewed as a Development of Regional Impact . . . ."

Response – The applicant fully acknowledges that the development of the property must be through a unified development plan, and further acknowledges the requirement for a Development of Regional Impact.

CA5: Internal Consistencies with Lee Plan – "Development in the University Community Future Land Use category must incorporate multi-modal connections to the University. In order to be consistent with the directives of the Lee Plan, the County or the developer of this property must be prepared to finance/fund transit alternatives to provide connectivity to the University Campus.

Response – Within Section 9 of the Alico application, the applicant has addressed Policy 18.1.5 of the Lee Plan. This policy states "Site design within the University Community must utilize alternative modes of transportation, such as pedestrian networks, mass transit opportunities, sidewalks, bike paths, and similar facilities.

In addressing this policy, the applicant has stated the following:

- Development will create a balanced mixture of uses intended to reduce overall trip lengths, to support pedestrian, bicycle and transit opportunities, and create pedestrian-friendly streets.
- The concept plan calls for outdoor livability, including interconnected pedestrian and bike facilities, walkways, public plazas, street furniture, and walkable block size.
- The development will encourage pedestrian and bicycle-friendly access with access to the development and the surrounding community.
- Existing Lee Tran routes can be extended to the subject property.
- The FGCU Campus Eagle Express Shuttle can provide transit opportunities within the University Community.
- The lake presents an opportunity for a future water taxi service.

By letter dated August 25, 2009, Michael Horsting, Principal Planner for Lee County Transit, stated "This type of development would be better served by a different type of service, such as a local circulator." It is the position of the applicant that the FGCU Eagle Express will function as a local circulator. An easement connecting FGCU with the Alico University Community project will create the connection from the FGCU campus to the

site and will be the route upon which the Eagle Express will operate. This will fulfill the requirement for and goal of a local circulator as requested by Mr. Horsting. Furthermore, the easement will be constructed to permit both vehicular traffic and a multi-modal path which can be used by cyclists and/or pedestrians.

Therefore, the applicant believes that it has complied with this requirement of the Lee Plan.

CA6: School District Representative Necessary at LPA hearing.

Response – No response required, as this was a directive to County staff.

CA7: Reclamation of Lake Banks – Please verify with the Port Authority staff whether the location of this project requires compliance with the FAA Advisory Circular pertaining to discouraging hazardous wildlife attractants near airports.

Response – The initial review by the County staff stated that the northeast portion of the property does fall under FAA Advisory Circular #150/5200-33B. Furthermore, WilsonMiller has contacted Port Authority staff member Ellen Lindblad and has confirmed that this FAA Advisory Circular is applicable only to the northeast portion of the property. Development plans will therefore be created to comply with this FAA Advisory Circular.

CA8: Water Quality Standards for Former Mining Lakes – The Miromar Lake project – Heightened water quality standards.

Response – In order to conduct the removal of the "fines", an ERP permit will be required from the Water Management District. Within the stipulations and conditions of the ERP for this project, the Water Management District will establish the water quality standards which must be met. Additionally, we will meet those water quality standards as applicable to the Miromar Lake project where they are also applicable to this lake.

CA9: Classification of Benderson property to the north of Alico – This property is the subject of a pending application for a Development of Regional Impact. Development of the property will be pursued as a mixed-use planned development.

Response – This information is duly noted – no action needed in this response.

On behalf of Alico Land Development, Inc., we submit these responses to your request for additional information. We welcome the opportunity to review our responses with you in person and look forward to further dialogue.

Sincerely,

Henderson, Franklin, Starnes & Holt, P.A.

Charles Basinait, Esquire

WilsonMiller, Inc.

Robert D. Hutcherson, AICP
Senior Project Manager
Associate

ALICO, INC.

640 South Main Street, LaBelle, Florida 33935 • Post Office Box 338, LaBelle, Florida 33975
Office (863) 675-2966 • Fax (863) 675-6928

AFFIDAVIT

ALICO-AGRI, LTD.

AUTHORIZATION TO FILE COMPREHENSIVE PLAN AMENDMENT

I, Steven M. Smith, Principal Executive Officer of Alico, Inc., Partner of Alico-Agri, LTD., do hereby authorize Donald R. Schrotenboer, President of Alico Land Development, Inc., to be the Agent for Alico-Agri, LTD., and further authorize Donald R. Schrotenboer to file a Comprehensive Plan Amendment Application on land in the ownership of Alico-Agri, LTD. in Lee County, Florida.

Alico-Agri, LTD.
By Alico Inc., General Partner

By _____
Steven M. Smith
Principal Executive Officer
Alico, Inc.

2.4.10
Date

DAVID PLUMMER & ASSOCIATES
TRANSPORTATION • CIVIL • STRUCTURAL • ENVIRONMENTAL

2271 McGREGOR BOULEVARD, SUITE 200, FORT MYERS, FLORIDA 33901
239 332-2617 • FAX: 239 332-2645 • DPAFM@DPLUMMER.COM

January 21, 2010

Dr. Richard L. Woodruff
WilsonMiller
12801 Westlinks Drive, Suite 106
Fort Myers, FL 33913-8001

RE: **CPA2009-01, Alico West Lee Plan Amendment, Sufficiency Review, #09539**

Dear Richard:

As requested, we are providing you with our response to Lee County staff question/comment B.1 regarding Part IV of the application.

B.1 The application states that the proposed floor area used in the Traffic Study is based on "conservative assumptions." Is the applicant proposing greater commercial intensities than shown in these portions of the application? Please provide a Traffic Study that is based on the worst case scenario.

Response

It is DPA's understanding that the land uses used in the Traffic Study represent the maximum development potential of the property resulting from the proposed CPA. DPA assumed full build-out of those uses by 2030. Therefore, the Traffic Study (dated August 4, 2009) analyzed the "worst case" scenario from a traffic perspective.

Please let me know if you have any questions regarding our response to the County's comment.

Very truly yours,

Ronald T. Talone
RTT:sw
09539:Woodruff_012110

cc: Donald Schrotenboer
Chuck Basinait

San Carlos Park Fire Protection and Rescue Service District

19591 Ben Hill Griffin Parkway • Fort Myers, Florida 33913-8989

Emergency 911
Office 239.267.7525
Fax 239.267.7505

August 28, 2009

Robert D. Hutcherson, AICP
Senior Project Manager
Associate

Wilson Miller, Inc
12801 Westlinks Drive
Suite 106
Fort Myers, Fl 33913

Re: Alico West

Dear Mr. Hutcherson,

Thank you for this opportunity to let me inform you about our fire district. The San Carlos Park Fire Protection and Rescue Service District is one of 17 Special Fire Districts in Lee County. The Insurance Service Office (ISO) currently rates our department as a Class 3 / 9. We currently have 3 fire stations which are staffed by 51 firefighters and supported by an administrative staff of 12.

The project location is 4miles or less from the main fire station located at 19591 Ben Hill Griffin Parkway. The response time would be about 4 minutes or less. At this time, we use Lee County Emergency Medical Services for Advanced Life Support (ALS) transport and have our own Firefighter Paramedics on shift to provide non-transport ALS services. There will be no adverse impact to the fire district to provide fire protection and inspection services.

The San Carlos Park Fire District is also responsible for all of your fire-related needs that will be encountered for your project through the planning stages to the time of occupancy. We currently have 4 full-time fire inspectors that work a 40 hour week to handle all the fire related inspections. The plan review and building permit process will go through Lee County Codes and Building Services.

If you have any questions or concerns, please feel free to contact me at 239-267-7525.

Sincerely,

Thomas M. Beard
Fire Marshal

Terri Doyle

From: Horsting, Michael [MHorsting@leegov.com]
Sent: Friday, January 29, 2010 8:26 AM
To: Richard Woodruff; Don Schrotenboer; Robert Hutcherson
Subject: RE: Letter - Michael Horsting, Lee County Transit re Alico West Comprehensive Plan Amendment - Sufficiency Response CPA 2009-01 - Additional Information_v1.DOC

Mr. Woodruff,

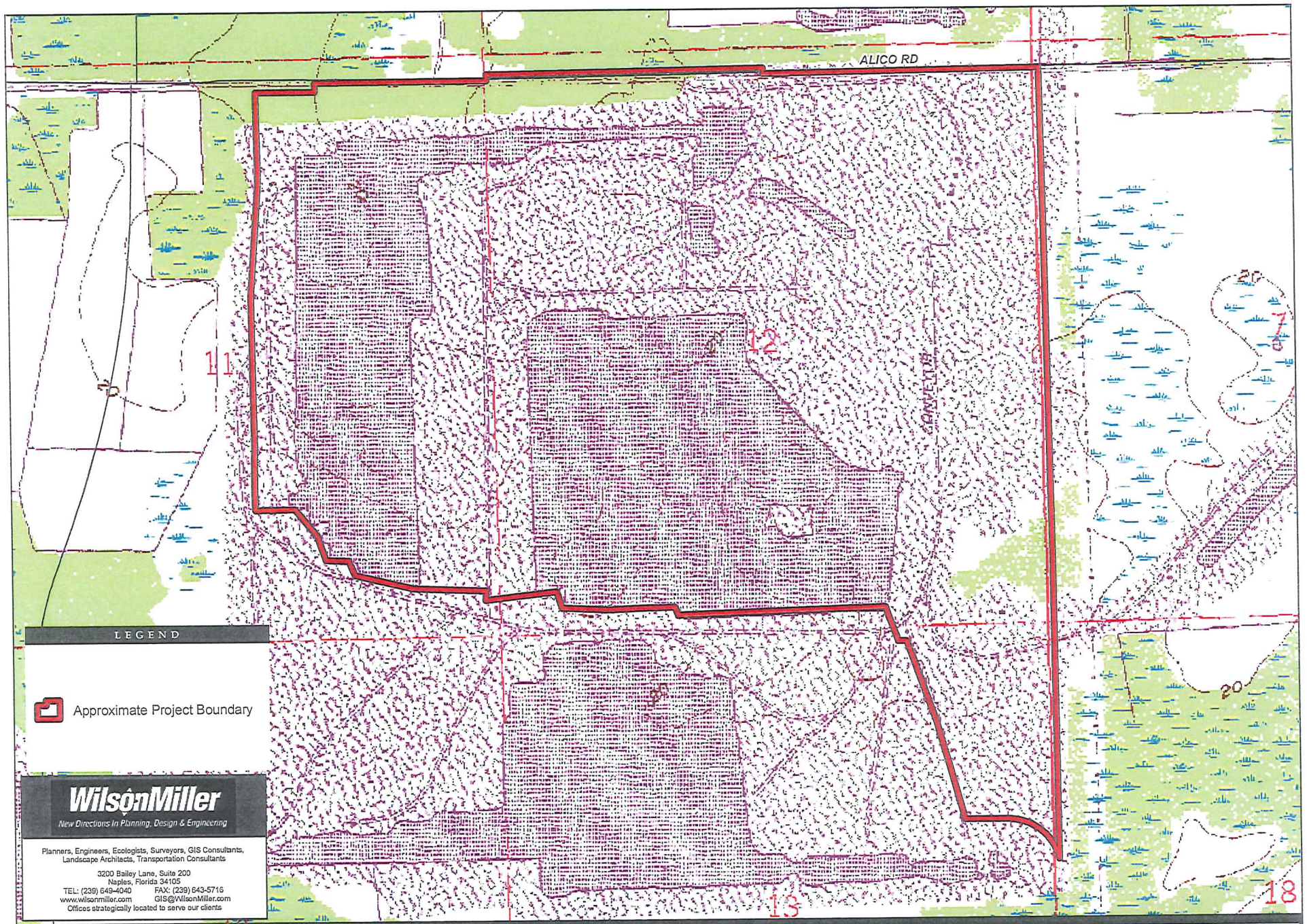
Thank you for your letter and for further explaining transportation concepts relative to the Alico West Comp Plan amendment. The FGCU Campus Eagle Express serving as a circulator is a logical approach and will provide connections to the LeeTran system at various points on the FGCU main campus.

I continue to be in training all day today; please confirm if this e-mail is a sufficient response or if you would still like to discuss this next week via telephone.

Thank-you,
Mike Horsting

From: Richard Woodruff [mailto:RichardWoodruff@wilsonmiller.com]
Sent: Thu 1/28/2010 4:44 PM
To: Horsting, Michael; Don Schrotenboer; Robert Hutcherson
Subject: Letter - Michael Horsting, Lee County Transit re Alico West Comprehensive Plan Amendment - Sufficiency Response CPA 2009-01 - Additional Information_v1.DOC

<<Letter - Michael Horsting, Lee County Transit re Alico West Comprehensive Plan Amendment - Sufficiency Response CPA 2009-01 - Additional Information_v1.DOC>> Mr. Horsting, please review the attached letter regarding the Alico West Comp Plan amendment CPA 2009-01. After review please contact me for discussion at 239-939-1020. Thank you for your courtesy. R



LEGEND

Approximate Project Boundary

WilsonMiller
New Directions in Planning, Design & Engineering

Planners, Engineers, Ecologists, Surveyors, GIS Consultants,
Landscape Architects, Transportation Consultants

3200 Bailey Lane, Suite 200
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TEL: (239) 649-4040 FAX: (239) 643-5716
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0 600 1,200
Feet

Alico West

U.S.G.S. Quad Map

GENERAL NOTES

This exhibit was prepared using GIS data provided by various sources that may include but are not limited to federal, state, district and local agencies. WilsonMiller, Inc. does not warrant data provided by other sources for accuracy or for any particular use that may require accurate information. This map is for informational purposes only and should not be substituted for a true title search, property appraisal, survey, or for zoning verification.

Created: February 04, 2010
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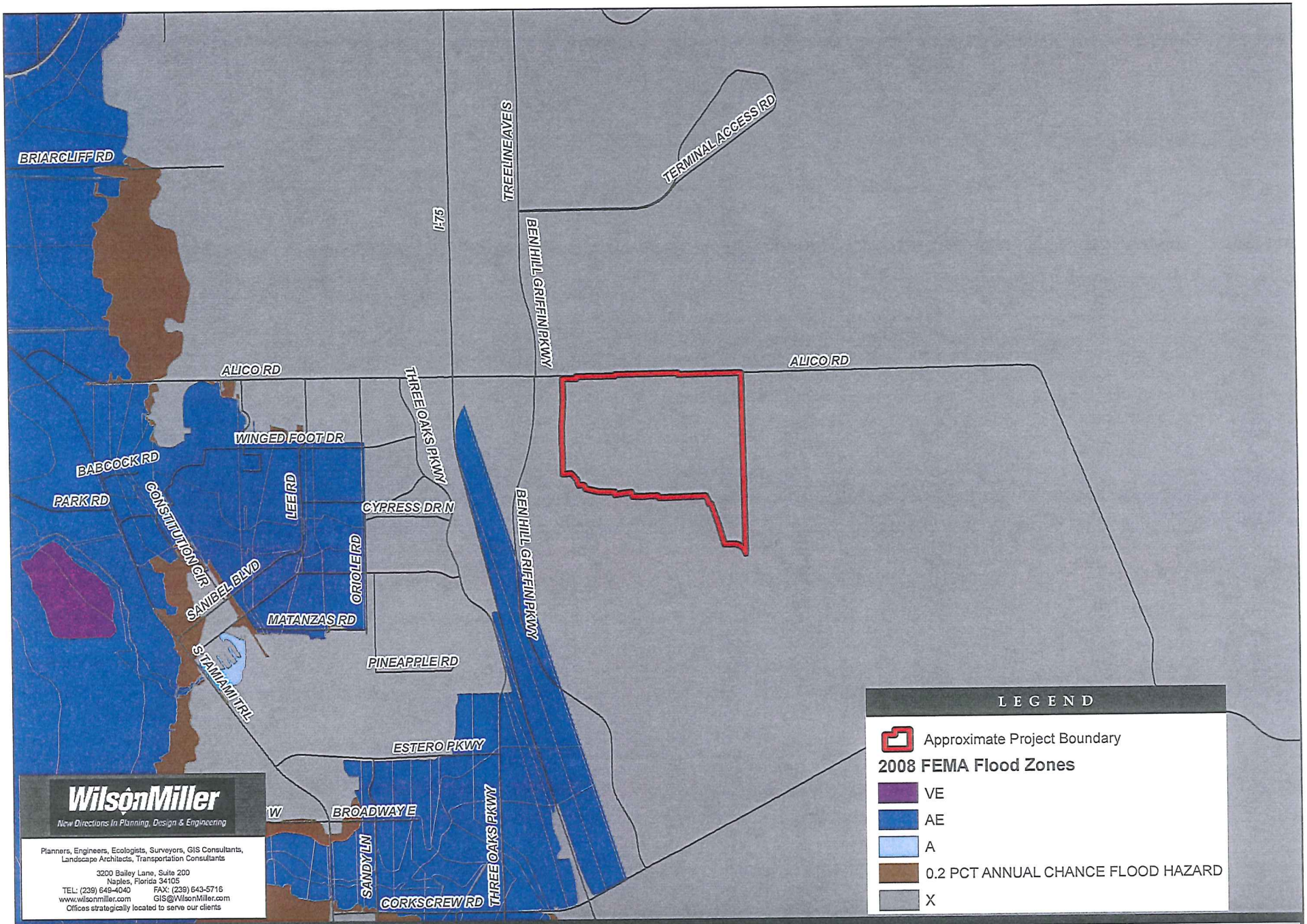

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0 0.5 1
Miles

Alico West

2008 FEMA Flood Zone Map

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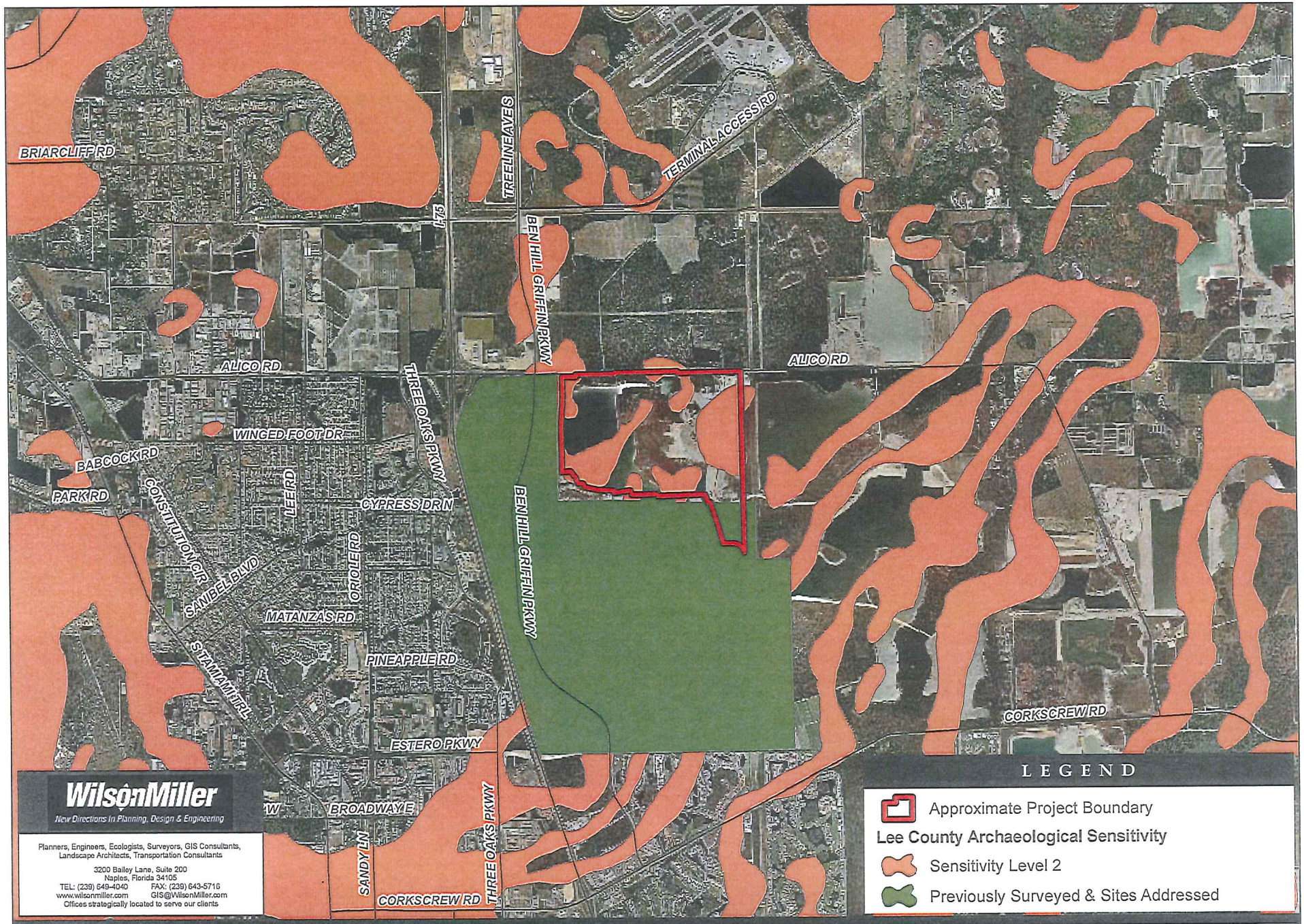

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0 0.5 1
Miles

Alico West

Lee County Archaeological Sensitivity Map

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ALICO WEST COMPREHENSIVE PLAN AMENDMENT

ENVIRONMENTAL SUPPLEMENT

Prepared For:

ALICO LAND DEVELOPMENT, INC.
P.O. Box 338
LaBelle, Florida 33975

PREPARED BY:

WILSONMILLER, INC.
12801 WESTLINKS DRIVE
SUITE 106
FORT MYERS, FLORIDA 33913

Submitted To:

Lee County

SEPTEMBER 2009

4/28/2009 - 58810 - Ver: 2 - KJOHNSON
CAF43
F0253-ALD-A09 - VWRK - 11211

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TABLES

EXHIBITS

1. Introduction

The Alico West site consists of approximately 919 acres and is located within Sections 11 and 12, Township 46 South, Range 26 East in Lee County. The property is bordered by Alico Road to the north, residential areas to the south, undeveloped lands to the west and inactive mining lands to the east. An existing powerline is located offsite to the east and extends the length of the property. The proposed SR 951 road extension also borders the eastern property boundary. An aerial photograph is included as Exhibit 1.

2. Property History

The subject property is currently an inactive mine site. Excavation activities commenced on this property in the 1970s, before permit approvals were required, with the entire site being disturbed by 1980.The first permit approvals for excavation activities were issued in 1986 and included additional lands located north and east of Section 12. Copies of historical aerial photographs are included in Exhibit 2.

Until recently, excavation was ongoing and processing facilities were located on the property. Although portions of the property were never "mined", historic aerials clearly show that almost the entire property was cleared and/or disturbed at one time. Many of these areas were left to naturally revegetate and now possess a variety of wetland and upland weedy species. Some of these areas pond water due to a high level of soil compaction, but can not be classified as "wetlands". Native habitats exhibiting high levels of exotic vegetation remain along the northern boundary of the site along Alico Road, and one area adjacent to the powerline easement.

Mining on the property has ceased and only minimal lake bank regrading work is ongoing. The processing plant and offices have been dismantled. Large piles of mined material remains stockpiled within the property. With the exception of the areas immediately adjacent to Alico Road, and scattered areas along the eastern powerline easement, the entire site has been disturbed.

3. Existing Conditions

3.1. Topography and Drainage

The property is located within the Estero River Watershed as indicated in the South Florida Water Management Basis of Review (1996) and Lee County watershed studies. The watershed consists of approximately two-hundred eighty-three (283) square miles of agricultural, urban, mining, and undeveloped land use areas.

The project site has been hydrologically isolated from the surrounding watershed during the excavation activities. As required by current regulations, the mining activities were confined within a perimeter berm which prevented runoff from the site. This design served to protect offsite water quality by segregating the mine waters from offsite surface waters which eventually flow to the Estero River. Recent permit approvals by the Department of Environmental Regulation approved the installation of an emergency control structure when mining operations ceased. This approval also required the site to be stabilized and returned to natural grade. Reclamation activities outlined

in the permit were minimal because the mine was underway prior to the mandatory reclamation requirements introduced in 1989.

3.2. Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey of Lee County, Florida, the property contains the following soils units. It should be noted that the extent of Water shown by the NRCS does not reflect an accurate representation of the extent of open water now present on the property as a result of the mining activities. The NRCS soils data overlain with a recent aerial photograph is included as Exhibit 3.

Table 1 – Soil Types within Alico West

Map Symbol	Soil Unit Name	Hydric Status
6	Hallendale Fine Sand	non-hydric
10	Pompano Fine Sand	hydric
12	Felda Fine Sand	
26	Pineda Fine Sand	
33	Oldsmar Sand	non-hydric
34	Malabar Fine Sand	hydric
49	Felda Fine Sand, Depressional	hydric
69	Matlacha gravelly fine sand	non-hydric
73	Pineda Fine Sand, Depressional	hydric
99	Water	n/a

06 - Hallandale Fine Sand - This is a nearly level, poorly drained soil on low, broad flatwoods areas. Slopes are smooth and range from 0 to 2 percent. The surface layer is gray fine sand about 2 inches thick. The subsurface layer is light gray fine sand about 5 inches thick. The substratum is very pale brown fine sand about 5 inches thick. At a depth of 12 inches is fractured limestone bedrock that has solution holes extending to a depth of 25 inches. These solution holes contain mildly alkaline, loamy material. Under natural conditions, the water table is less than 10 inches below the surface for 1 to 3 months. It recedes below the limestone for about 7 months. The available water capacity is low. Natural fertility is low. Permeability is moderate to moderately rapid.

10 - Pompano fine sand - This is a nearly level, poorly drained soil on sloughs. Slopes are smooth to concave and range from 0 to 1 percent. The surface layer is dark gray fine sand about 4 inches thick. The underlying layers are light gray, very pale brown, or white fine sand and extend to a depth of 80 inches or more. Under normal conditions, the water table is at a depth of less than 10 inches for 2 to 4 months, and at a depth of 10 to 40 inches for about 6 months. It recedes to a depth of more than 40 inches for about 3 months. During periods of high rainfall, the soil is covered by slowly moving water for periods of about 7 to 30 days or more. The available water capacity is very low. Natural fertility is low. Permeability is rapid.

12 - Felda fine sand - This is a nearly level, poorly drained soil on broad, nearly level sloughs. Slopes are smooth to concave and range from 0 to 2 percent. The surface layer is dark gray fine sand about 8 inches thick. The subsurface layer is light gray and light brownish gray fine sand about 14 inches thick. The subsoil is light gray loamy fine sand about 16 inches thick and is underlain by gray and light gray fine sand that extends to a depth of 80 inches or more. Under normal conditions, this soil has a water table within 10 inches of the surface for 2 to 4 months. The water table is 10 to

40 inches below the surface for about 6 months. It is more than 40 inches below the surface for about 2 months. During periods of high rainfall, the soil is covered by a shallow layer of slowly moving water for periods of about 7 to 30 days or more. The available water capacity is low in the surface and subsurface layers and medium in the subsoil. Natural fertility is low. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid in the substratum.

26 - Pineda fine sand - This is a nearly level, poorly drained soil on sloughs. Slopes are smooth to slightly concave and range from 0 to 1 percent. The surface layer is black fine sand about 1 inch thick. The subsurface layer is very pale brown fine sand about 4 inches thick. The upper part of the subsoil is brownish yellow fine sand about 8 inches thick. The next 10 inches is strong brown fine sand. The next 6 inches is yellowish brown fine sand. The next 7 inches is light gray fine sand with brownish yellow mottles. The lower part of the subsoil is light brownish gray fine sandy loam with light gray sandy intrusions about 18 inches thick. The substratum is light gray fine sand to a depth of 80 inches or more. Under natural conditions, the water table is within 10 inches of the surface for 2 to 4 months. It is 10 to 40 inches below the surface for more than 6 months, and it recedes to more than 40 inches below the surface during extended dry periods. During periods of high rainfall, the soil is covered by a shallow layer of slowly moving water for periods of about 7 to 30 days or more. The available water capacity if very low in the surface and subsurface layers and in the upper, sandy part of the subsoil and medium in the lower, loamy part of the subsoil. Natural fertility is low. Permeability is rapid in the surface and subsurface layers and the upper, sandy part of the subsoil and slow or very slow in the lower, loamy part of the subsoil.

33 - Oldsmar sand - This is a nearly level, poorly drained soil on low, broad flatwoods areas. Slopes are smooth to slightly convex and range from 0 to 2 percent. The surface layer is black sand about 3 inches thick. The subsurface layer is gray and light gray sand about 39 inches thick. The upper part of the subsoil is very dark gray sand about 5 inches thick. The lower part of the subsoil is yellowish brown and mixed light brownish gray and brown fine sandy loam about 11 inches thick. Pale brown sand extends to a depth of 80 inches or more. Under natural conditions, the water table is at a depth of less than 10 inches for 1 to 3 months. It is at a depth of 10 to 40 inches for more than 6 months, and it recedes to a depth of more than 40 inches during extended dry periods. The available water capacity is low in the surface layer and medium in the subsoil. Natural fertility is low. Permeability is rapid in the surface and subsurface layers, moderate in the upper part of the subsoil, and slow or very slow in the lower part of the subsoil.

34 - Malabar fine sand - This is a nearly level, poorly drained soil on sloughs. Slopes are smooth to concave and range from 0 to 1 percent. The surface layer is dark gray fine sand about 5 inches thick. The next 12 inches is light gray and very pale brown fine sand. Below this are a 16-inch layer of light yellowish brown fine sand with yellow mottles and a 9-inch layer of brownish yellow fine sand. The subsoil layer is gray loamy fine sand about 9 inches thick with large yellowish brown mottles. The next 8 inches is gray fine sandy loam with large brownish yellowish mottles. Below is light gray loamy fine sand with yellowish brown mottles to a depth of 80 inches or more. Under natural conditions, the water table is at a depth of less than 10 inches for 2 to 4 months. It is at a depth of 10 to 40 inches for more than 6 months, and it recedes to a depth of more than 40 inches during extended dry periods. During periods of high rainfall, the soil is covered by a shallow layer of slowly moving water for periods of about 7 to 30 days or more. The available water capacity is low in the surface and subsurface layers and the upper part of the subsoil and medium in the lower part of the subsoil. Natural fertility is low. Permeability is rapid in the surface and subsurface layers and the upper part of the subsoil and slow or very slow in the lower part of the subsoil.

49 - Felda fine sand, depressional - This is a nearly level, poorly drained soil in depressions. Slopes are concave and less than 1 percent. The surface layer is gray fine sand about 4 inches thick. The subsurface layers extend to a depth of 35 inches. The upper 13 inches is grayish brown fine sand and the lower 18 inches light gray fine sand with yellowish brown mottles. The subsoil is about 17 inches thick. The upper 6 inches is gray sandy loam and the lower 11 inches is sandy clay loam with many yellowish brown and strong brown mottles. Below this is light gray fine sand to a depth of 80 inches or more. Under natural conditions, the soil is ponded for about 3 to 6 months or more. The water table is within a depth of 10 to 40 inches for 4 to 6 months. The available water capacity is low in the surface and subsurface layers and medium in the subsoil. Natural fertility is low. Permeability is rapid in the surface and subsurface layers and moderate or moderately rapid in the subsoil.

69 - Matlacha gravelly fine sand - This is a nearly level, somewhat poorly drained soil formed by filling and earthmoving operations. Slopes are smooth to slightly convex and range from 0 to 2 percent. The surface layer is about 35 inches of black, olive brown, grayish brown, dark brown, light brownish gray, very dark gray, and very pale brown mixed gravelly fine sand and sandy mineral material. The surface layer contains lenses of loamy sand and coated sandy fragments of former subsoil material with about 25 to 30 percent limestone and shell fragments. Below this, to a depth of 80 inches or more, is undisturbed fine sand. The upper 5 inches is dark gray and the lower 40 inches is light gray with common, medium, distinct dark grayish brown stains along old root channels. The depth to the water table varies with the amount of fill material and the extent of artificial drainage. However, in most year, the water table is 24 to 36 inches below the surface of the fill material for 2 to 4 months. It is more than 60 inches below the surface during extended dry periods. The available water capacity is variable, but it is estimated to be low. Permeability is variable within short distances, but it is estimated to be moderately rapid to rapid in the fill material and rapid in the underlying material. Natural fertility is estimated to be low.

73 - Pineda fine sand, depressional - This is a nearly level, very poorly drained soil in depressions. Slopes are concave and are less than 1 percent. Typically, the surface layer is dark gray fine sand about 3 inches thick. The subsurface layer is fine sand to a depth of 31 inches. The upper 9 inches is light gray, the next 7 inches if very pale brown with yellowish brown mottles, and the lower12 inches is brownish yellow with many iron-coated sand grains. The subsoil is fine sandy loam to a depth of 55 inches. The upper 8 inches is gray with very pale brown sandy intrusions and yellowish brown mottles. The lower 16 inches is gray. Below that and extending to a depth of 80 inches is light gray loam sand. Under natural conditions, the soil is ponded for about 3 to 6 months or more. The water table is within a depth of 10 to 40 inches for 4 to 6 months. The available water capacity is low in the surface and subsurface layers and medium in the subsoil. Natural fertility is low. Permeability is rapid in the surface and subsurface layers and slow or very slow in the loamy subsoil,

3.3. Vegetation Associations/Land Uses

The habitat and vegetation survey included the preparation of a Florida Land Use, Cover and Forms Classification System (FLUCCS) map delineating the major vegetation communities, landforms, and land uses present on the project site. The methods and class descriptions found in the FLUCCS manual (FDOT 1999) were generally followed when delineating and assigning areas to an appropriate FLUCCS category (class) or "code". A FLUCCS map unit is a unique area (or polygon) mapped using a major FLUCCS category code. Plant communities were mapped using direct field observations and aerial photo interpretation. Vegetative and land use mapping was conducted in May 2009.

A significant factor in mapping vegetative associations and local habitats is the invasion by the exotic plant species Melaleuca (*Melaleuca quinquenervia*) and Brazilian pepper (*Schinus*

terebinthifolius). Four levels of exotic density were mapped by WilsonMiller using photo interpretation and field observations. Code modifiers are appended to the FLUCCS code to indicate the approximate density of Melaleuca and/or Brazilian pepper in the canopy or understory, as follows:

E1 = Exotics 10-24%
E2 = Exotics 25-49%
E3 = Exotics 50-75%
E4 = Exotics 75-84%

An area is mapped by WilsonMiller as Melaleuca (FLUCCS 424) or Brazilian pepper (FLUCCS 422) when Melaleuca or Brazilian pepper constitutes 85% or more of the canopy and subcanopy strata.

Nuisance plant species include species that, although native, are invasive and have the capacity to significantly alter the composition of native plant assemblages and/or restrict the development of more beneficial native plant species. Examples of potential nuisance species include West Indian marsh grass (*Hymenachne amplexicaulis*), cattail (*Typha spp.*), common primrose willow (*Ludwigia peruviana*), climbing hempweed (*Mikania scandens*), and torpedo grass (*Panicum repens*). Four levels of nuisance plant infestation are used in mapping and are based on the total percent cover accounted for by the nuisance plant species. These are:

N1 = 10-24% cover by nuisance species
N2 = 25-49% cover by nuisance species
N3 = 50-75% cover by nuisance species
N4 = > 75% cover by nuisance species

Existing FLUCCS Habitats on the Alico West Property

Rock Mining – Active – (FLUCCS 163A) – This category was used to describe the stockpiles of mined and processed rock / sand still remaining on the property. It also includes the sites of the mine offices, storage facilities and processing equipment, all of which are in various stages of demolition and removal from the property at the current time. These areas are still actively being graded and worked by heavy earth moving equipment. There is little if any vegetation present in these highly disturbed areas.

Rock Mining – Inactive – (FLUCCS 163B) – This category was used to describe the areas within the old mining operation where spoil, tailings from gravel processing and other waste materials were stockpiled or spread. Many of these areas have been inactive for extended periods of time and have become established by various nuisance and exotic vegetative species including cattails (*Typha Sp.*), Melaleuca (*Melaleuca Quinquenervia*), Brazilian pepper (*Schinus terebinthifolius*), giant reed (*Phragmites australis*), cut grass (*Leersia hexandra*) and numerous other undesirable species. The soils in these habitats are quite compacted and hard presumably as a result of the fine waste materials that were disposed of in those areas.

Shrub Land – (FLUCCS 320 E2) – This habitat is dominated by a mixture of saw palmetto (*Serenoa repens*) and wax myrtle (*Myrica cerifera*) with scattered slash pine (*Pinus elliottii*) saplings and seedlings also present. Scattered Melaleuca and Brazilian pepper are also abundant throughout the general area. It appears this habitat was previously dominated by slash pine, but the mature pines were damaged during the hurricanes of 2004 and 2005 and the resulting invasion of pine beetles and other wood boring insects killed most of the mature trees. There were

no signs of fire, just numerous dead pines, many of which were broken or split 10-20 feet above the ground.

Saw Palmetto – Exotics 10%-24% - (FLUCCS 321 E1) – This habitat includes several small saw palmetto (*Serenoa repens*) dominated areas that are heavily invaded by Melaleuca. Much of this habitat has recolonized within areas that were previously cleared during mine related activities. The surrounding land is predominantly open, sparsely vegetated and invaded by Melaleuca and Brazilian pepper with various herbaceous groundcover typical of highly disturbed land.

Pine Flatwoods – Exotics 10%-24% - (FLUCCS 411 E1) – This upland flatwoods community is dominated by slash pine with a saw palmetto understory. Melaleuca and Brazilian pepper are present, but are just beginning to establish and potentially become a problem. The open areas within this habitat show some signs of water flow through the palmettos from Alico Road into the property. The absence of a road side ditch along this property allows all road runoff to enter the site and flow toward the internal canals excavated as part of the mining operation.

Pine Flatwoods – Exotics 25%-49% - (FLUCCS 411 E2) – This upland community is similar to the above pine flatwoods habitat except that Melaleuca and Brazilian pepper are more abundant. The exotic species present comprise nearly half of the dominant vegetative species in this general area. Saw palmetto still makes up a large percentage of the understory vegetation.

Pine Flatwoods – Exotics >75% - (FLUCCS 411 E4) – This upland community is similar to the above pine flatwoods habitat except that Melaleuca and Brazilian pepper are dominant. The exotic species present comprise the dominant vegetative species in this general area.

Pine Flatwoods, Graminoid Understory – Exotics >75% - (FLUCCS 416 E4) – This habitat is located along the eastern property boundary and consists of a narrow vegetated strip along the eastern property boundary. This vegetative community includes a sparsely dominant canopy of mature slash pine which has been heavily invaded by Melaleuca and to a lesser extent, Brazilian pepper. This habitat exhibits signs of regular, but infrequent inundation as there are several signs of standing water throughout the general area. Goober grass (*Amphicarpum muhlenbergianum*), southern cut grass (*Leersia hexandra*) and various incidental sedges and forbes make up the sparse understory in this general area.

Brazilian Pepper – (FLUCCS 422) – This habitat is highly disturbed and vegetated by dense monocultures of Brazilian pepper. Scattered swamp fern (*Blechnum serrulatum*) and grape vine (*Vitus rotundifolia*) are also present throughout the general habitat.

Melaleuca – (FLUCCS 424) – This category describes disturbed habitats that are vegetated by dense monocultures of Melaleuca. These habitats are slightly lower in elevation than the Brazilian pepper dominated habitats. The sparse groundcover in these areas is comprised of goober grass (*Amphicarpum muhlenbergianum*), chocolate weed (*Melochia corchorifolia*), poison ivy (*Toxicodendron radicans*) and various other incidental species. Some of the Melaleuca trees have signs of standing water at the base of the trunks, but the papery bark "wicks up" moisture resulting in false high water indicators. It is safe to say the ground in this area is probably saturated during the summer rainy seasons on most normal years.

Canals – (FLUCCS 512) – This category describes the large perimeter canal that borders the northern edge of the mined property. The associated spoil berm created when this canal was

excavated lies south of the canal. This canal collects runoff from Alico Road and the remaining adjacent natural habitats and directs it to the internal borrow lake.

Lake – (FLUCCS 520) – This code is used to describe the large borrow lake that was created by the rock mining activities during the active excavation of fill materials over the life of the mine. The lake is very deep in sections and there are numerous shallow areas that were not entirely excavated. The western and northern shorelines are somewhat sloped, but the internal littoral shoreline is very narrow and drops rather quickly into deeper water.

Cypress – Exotics 50%-74% (FLUCCS 621 E3) – These habitats include a small cypress (*Taxodium distichum*) domed wetland and a small forested cypress dominated wetland habitat. Both of these wetlands have been invaded by Melaleuca and to a lesser degree, Brazilian pepper. The mature cypress trees appear healthy and there were several bromeliad species observed in the forested areas within these habitats. The bromeliads observed included: inflated wild pine (*Tillandsia balbisiana*), cardinal air plant (*Tillandsia fasciculata*), potbelly air plant (*Tillandsia paucifolia*) and the giant air plant (*Tillandsia utriculata*). Butterfly orchids (*Encyclia tampensis*) were also observed on both cypress and Melaleuca trees in this general area. Stain lines on the cypress indicate these areas still receive abundant water to maintain the wetland systems health and function.

Pine / Cypress Flatwoods – Exotics>75% - (FLUCCS 624 E4) – This habitat is dominated by a mixture of slash pine and cypress with dense Melaleuca and scattered Brazilian pepper throughout. The previously listed bromeliad species and orchid species were also present in this habitat. Groundcover is sparse due to the density of the trees, but swamp fern and goober grass were scattered throughout the area. Stain lines and water marks were present on most trees indicating standing water is present for a portion of the summer rainy season.

Hydric Pine Flatwoods – Exotics 50%-74% - (FLUCCS 625 E3) – This category describes the pine flatwoods habitats that have an open, grassy understory. Scattered swamp fern, goober grass and various sedges are found in the groundcover in these habitats. These flatwoods are seasonally inundated for periods long enough to prevent the establishment of saw palmetto and other upland shrubs and groundcover species. Melaleuca and Brazilian pepper are very abundant throughout these areas and are becoming dominant in the midstory and canopy in several of these habitats.

Hydric Pine Flatwoods – Exotics>75% - (FLUCCS 625 E4) – This habitat is similar to the above described hydric flatwoods except Melaleuca and Brazilian pepper have become dominant throughout the canopy in this habitat. All other species are similar to the hydric pine flatwoods habitat with the lower percentage of exotic and nuisance vegetation.

Freshwater Marsh – Exotics 25%-49% - (FLUCCS 641 E2) – These habitats are located in the deeper section of the cypress domed wetland and the forested cypress habitat located just south of Alico Road in the northern limits of this property. Vegetation includes fireflag (*Thalia geniculata*), arrowhead (*Sagittaria lancifolia*), pickerelweed (*Pontedaria cordata*), saw grass (*Cladium jamaicense*) swamp fern and numerous sedges. Melaleuca and to a lesser extent, Brazilian pepper have invaded these habitats. Cattails are also problematic in small pockets in these marsh habitats. Evidence suggests standing water up to several feet deep is present during the wet summer months.

Wet Prairie – (FLUCCS 643) – This habitat is located on a section of the old mine haul road near the southeastern end of the property. The filled haul road has been removed and the area has been replanted with sand cordgrass (*Spartina bakeri*), maidencane (Panicum hemitomon), small cypress (Taxodium distichum), slash pine and wax myrtle (Myrica cerifera). Numerous other incidental wetland species have naturally colonized in this reclamation area. Scattered Melaleuca seedlings and Brazilian pepper seedlings are also present throughout the habitat.

Disturbed Lands – (FLUCCS 740) – This category describes the land that was cleared years ago as part of the actual mine operations or the initial mapping / exploratory operations prior to the actual start of the mining activities. Most of these areas have revegetated, but are dominated by nuisance or exotic species such as Melaleuca, giant reed, scattered Brazilian pepper with and understory primarily of goober grass and a mixture of sedges and other opportunistic colonizing herbaceous species that are tolerant of the highly disturbed conditions found in these habitats.

Disturbed Lands – Hydric - (FLUCCS 740-H) – This category describes highly disturbed areas that were associated with mining activities described above, but these areas seasonally are inundated during periods of high water or the water levels saturate the soils due to high underlying cap rock. Vegetation in these areas is also dominated by nuisance and exotic species or colonizing species similar to those described above.

Disturbed Lands – Exotics 25% - 49% - (FLUCCS 740 E2) – This category describes an area that was previously cleared as part of the mining operation on site. Dominant vegetation includes a mixture of Melaleuca, Brazilian pepper and Senna (*Cassia angustifolia*) with very few native species present. A sparse mixture of grasses and sedges makes up the herbaceous groundcover in this area.

Borrow Areas – (FLUCCS 742) – This code describes several areas within the mine spoil / tailings that have been excavated leaving numerous shallow depressions and holes. These areas are small open water habitats, if deep enough or they are vegetated by dense growths of cattails. Because they occasionally connect to the large lake during extreme high water events, fish can become trapped in these habitats creating forage opportunities for wading bird species that are regionally abundant in this general area of the state.

Spoil Berms – (FLUCCS 7431) – This category describes the spoil berms associated with canal excavation as part of the mining operations on site. The berm is vegetated with dense Brazilian pepper and grape vine.

Decorative Berms – (FLUCCS 7432) – This code describes the two (2) large berms that were constructed on the mine spoil / tailings and planted with palms to obstruct the view from the residential community on the western and southern shoreline of the mine lake. It also includes the perimeter berm along the south side of Alico Road that was required to buffer the mine activities from Alico Road.

Exhibit 4 provides a FLUCCS map of the Alico West property. Table 2 summarizes the acreage of habitats found within the Alico West property.

Table 2 – Existing Vegetative Associations and Land Use Descriptions on Alico West

FLUCCS CODE	FLUCCS DESCRIPTION	ACRES
163-A	Rock Mining – Active Land	262.8
163-B	Rock Mining – Inactive Land	230.6
320 E2	Shrub Land, Exotics 25% - 49%	4.7
321 E1	Saw Palmetto, Exotics 10% – 24%	1.4
411 E1	Pine Flatwoods 10%-24% Exotics	2.4
411 E2	Pine Flatwoods, Exotics 25% - 49%	2.8
411 E4	Pine Flatwoods, Exotics >75%	9.7
416 E4	Pine Flatwoods, Graminoid Understory, Exotics >75%	7.5
422	Brazilian Pepper	1.3
424	Melaleuca	25.3
512	Canals	1.5
520	Lake	261.6
621 E3	Cypress – 50% - 74% Exotics	3.4
624 E4	Pine/Cypress Flatwoods - >75% Exotics	30.7
625 E3	Hydric Pine Flatwoods – 50% - 74% Exotics	5.1
625 E4	Hydric Pine Flatwoods - >75% Exotics	7.6
641 E2	Freshwater Marsh – 25% - 49% Exotics	0.8
643	Wet Prairie	1.5
740	Disturbed Lands	20.6
740-H	Disturbed Lands - Hydric	14.6
740 E2	Disturbed Lands, 25% – 49% Exotics	2.9
742	Borrow Areas	10.6
7431	Spoil Berms	0.7
7432	Decorative Berms	8.9
	Totals	919.00

4. Listed Species

4.1. Listed Wildlife Species Observed On Site

Following is a summary of the listed wildlife species observed on site during the listed species survey conducted on May 8th and 12th, 2009. Due to the extremely disturbed conditions on site resulting from years of mining and the associated grading, sorting and trucking operations, there is very limited natural habitat remaining on the property. The remaining habitat has been highly disturbed by alteration of the surface water flows and the removal of a majority of the native vegetation. As such, other than water dependant species, there is limited potential habitat present for use by listed wildlife species.

Despite the poor quality of the remaining habitat, Lee County still requires the listed species pedestrian transects cover 80% of the subject property. Craig Schmittler, CSE, PWS, Senior Ecologist of WilsonMiller, Inc. conducted a thorough listed species survey of the subject property on May 8th and 12th, 2009. An aerial showing the approximate location of the pedestrian listed species transects is attached as Exhibit 5. There are a few areas within the mine reclamation site that were not surveyed due to the operation of heavy equipment in those areas during the time of this survey. The areas in question are predominantly stockpile spoil material remaining from the mine activities. This material was being removed from the site at the time of these inspections.

In addition to the field survey, GIS inquiries regarding listed wildlife species were performed by WilsonMiller using the latest publicly available data sets from the Florida Fish and Wildlife

Conservation Commission (FWC) and the Florida Natural Areas Inventory (FNAI). The results of the FNAI inquiry revealed that there were no listed species observations on this property in that database. Several old telemetry points from collared panthers (most observations made in the early 90's) are present on properties to the south, east and northwest, but many of the areas where these panther data point occurred have been since mined or developed.

A bald eagle nest, almost 2 miles northwest of the subject property and west of Ben Hill Griffin Parkway, which was last active in the 1996 nesting season is the only other listed species data point that shows up in the FNAI database. No other listed species sightings are reported on or adjacent to this property.

The Florida Atlas of Breeding Sites for Herons and Their Allies, dated September 1991, shows the closest known breeding colony occurring within 9 miles to the south of this property. All other known colony sites included in this atlas are located farther than 9 miles from the subject property. Although there is little if any nesting or roosting habitat remaining on the subject property, there is abundant forage and roost habitat present in and adjacent to the numerous borrow areas that remain on site. The proposed use of this property will have little if any effect on these uses by the numerous wading bird species that have been observed on site or those species that were not observed, but are known to be regionally abundant and assumed to be present.

Listed wildlife species observed on site during these listed species surveys are detailed in Table 3 below.

Table 3 – Listed Wildlife Species Observed on Alico West

Common Name	Scientific Name	Site Habitat by FLUCCS	FWC Status	FWS Status	FDA Status
REPTILES					
American Alligator	*Alligator mississippiensis*	520	SSC	T (S/A)	N/A
BIRDS					
Tri-colored heron	*Egretta tricolor*	520, 742	SSC	NL	N/A
Little Blue Heron	*Egretta caerula*	520, 742	SSC	NL	N/A
Snowy egret	*Egretta thula*	520, 742	SSC	NL	N/A
Wood Stork	*Mycteria americana*	520, 742	E	E	N/A

FDA = Florida Department of Agriculture and Consumer Services
FWC = Florida Fish and Wildlife Conservation Commission
FWS = United States Fish & Wildlife Service
E = Endangered
T = Threatened
C = Commercially Exploited
NL = Not listed
NA = Not Applicable

The following listed species were observed during the on site pedestrian transects. Several wading bird species were observed and numerous others, though not observed are presumed to be present due to the abundant littoral habitat for potential foraging and the fact that most of these wading bird species are regionally abundant in this geographic area.

Tricolored Heron
A single tricolored heron (*Egretta tricolor*) was observed in the littoral vegetation on the southern shoreline of the excavated area east of the main borrow lake on site. It was foraging along the shoreline at the time it was seen. This species is listed by the FWC as a species of special concern, but is a commonly encountered species in this region. The project as proposed will have minimal effect on the foraging habitat already present in this large lake. There are minimal potential nesting roosting sites on site so the anticipated effect of the project as proposed, on this species in negligible.

Little Blue Heron
Several little blue herons (Egretta caerulea) were observed foraging in the large mine lake and in several of the borrow areas located within the tailings / waste from the mine operation. This species is also listed as a species of special concern, but is also regionally abundant. The project as proposed will have no negative effects on the available forage habitat for this species. There is no potential nest / roost habitat on the subject property.

Snowy Egret
A group of seven (7) snowy egrets (Egretta thula) were observed foraging in the small excavated borrow areas within the tailings from the mining activities. These birds have been classified as a species of special concern by the FWC, but are also a species that is very plentiful in this geographic region. The project as proposed would have no effect on the available forage habitat for this species of wading bird.

Wood Stork
A single wood stork was observed foraging in the shallow excavated borrow areas located in the disturbed habitat on the eastern side of the large mine lake during this inspection. Wood storks have been observed on this lake on numerous occasions over the years. These birds are classified as endangered by both the FWC and FWS. The project as proposed should have no effects on this protected species of wading bird.

American Alligator
Several alligators were observed in the vegetation along the northern shoreline of the large mine borrow lake and in the smaller excavated area at the eastern end of the long northern finger of the large borrow lake. This species is classified as a species of special concern by the FWC and is classified as threatened by the FWS. The development of the property as proposed should have no effects on the alligator population in the general area of this property.

Listed Species observed onsite are located on Exhibit 6.

Table 4 includes a list of all non-listed wildlife species observed during the species surveys on site.

Table 4 - Non-listed Wildlife Species Observed on Alico West

Common name	Scientific name
Cuban Anole	*Anolis sagrei*
Green Anole	*Anolis carolinensis*
Green Tree Frog	*Hyla cinerea*
Cuban Tree Frog	*Osteopilus sepentrionalis*
Black Racer	*Coluber constrictor*
Florida Softshell Snapping Turtle	*Apalone ferox*
Florida Cooter	*Pseudemys floridana*
White Tailed Deer	*Odocoileus virginianus*
Florida Cottontail Rabbit	*Sylvilagus floridanus*
Armadillo	*Dasypus novemcinctus*
Gray Squirrel	*Sciurus carolinensis*
Raccoon	*Procon lotor*
Boat Tailed Grackle	*Quiscalus major*
Common Grackle	*Quiscalus quiscula*
Swallowtail kite	*Elanoides forficatus*
Anhinga	*Anhinga anhinga*
Blue Jay	*Cyanocitta cristata*
Cardinal	*Cardinalis cardinalis*
Mosquitofish	*Gambusia affinis*
Sailfin Mollies	*Poecilia latipinna*
Largemouth Bass	*Micropterus salmoides*
Bluegill	*Lepomis macrochirus*
Florida Gar	*Leisosteus platyrhincus*
Apple Snail	*Pomacea paludosa*
Crayfish	*Procambarus acutus*

4.2. Listed Wildlife Species Potentially Present But Not Observed On Site

Following is a discussion of listed wildlife species that have not been confirmed as occurring on the subject property by direct observation, but are considered to be potentially present due to the presence of suitable habitat, confirmed sightings on adjacent sites, etc. These species are listed in Table 5 below.

Wading Bird Species

Several species of listed wading birds have been observed foraging in and adjacent to the lakes and created borrow pond habitats on the subject property. There are many other listed wading bird species such as White Ibis (*Eudocimus albus*), Limpkin (*Aramus guarauna*), roseate spoonbill (*Ajaia ajaia*) and many other wading bird species that could potentially use these areas as forage habitat. This use will not be affected by the proposed development of the property. There is minimal potential roost / nest habitat on the subject property, but there is ample forage habitat on site and in the immediate vicinity.

Bald Eagle

No bald eagles (*Haliaeetus leucocephalus*) or nests of this species were observed during this inspection. No known nests are known to be located within 1500 linear feet (the distance of a typical primary and secondary eagle nest protection zone) of the subject property boundary. The presence of the large borrow lake indicates high potential for eagle use as a forage site as most large water bodies in this geographic region have a resident pair of eagles nearby that periodically fish in the lakes. The absence of large trees on site would greatly reduce the potential for eagles

nesting on site, but there are forested areas close enough that eagles could potentially use this as a forage site.

Snail Kite

No snail kites (Rostrhamus sociabilis) were observed on site during this inspection, but there were several trees along the lake shoreline that had large piles of apple snail shells underneath. These potential perch trees and the presence of a sizable population of apple snails in the lake would indicate this site is probably used by snail kites periodically throughout the year. The absence of available / suitable nest trees coupled with the abundance of nuisance and exotic tree species in the few forested areas on site, would likely limit snail kit use of this property to forage and seasonal uses.

Big Cypress Fox Squirrel

No Big Cypress Fox Squirrels (Sciurus niger Avicennia) were observed on the subject property during this inspection. There are remnant, forested habitats immediately south of Alico Road that could potentially be used by this species as forage, nest and day bed sites. Gray squirrels were observed in the edge of the hydric pine flatwoods habitats during this inspection. No day beds or apparent nest structures were observed in any of the forested habitats inspected on site. The proposed development of this property would likely have no effect on Big Cypress fox squirrels if they are present. The resulting exotic removal and preservation of some of the habitats on site would improve the potential habitat for this species.

Red-Cockaded Woodpecker

There were no red-cockaded woodpeckers (Picoides biorealis), start holes or cavity trees observed during the listed species surveys conducted on site. The absence of mature pines in most of the forested areas on site, coupled with the dense growths of Melaleuca, and to a lesser extent Brazilian pepper, prevent these birds from utilizing the remaining forested habitats. The absence of large acreages of sapling to seedling dominated pine flatwoods as available forage habitat further reduces the probability of this property being effectively utilized by the red-cockaded woodpecker. The minimal acreage of forested pine habitat on site is the greatest limiting factor preventing these birds from using this site. As such, the proposed development of the property should have no effect on this species.

Eastern Indigo Snake

Although no eastern indigo snakes (Drymarchon couperi) were observed, there is potential habitat present in the forested habitats found immediately south of Alico Road. The abundance of fallen trees, hollowed out logs and vegetative debris piles provides numerous hiding places for these snakes. In addition, conditions on site are favorable for heavy use by rodents and other snakes, both preferred food items of the indigo snake. The potential habitat for these snakes is limited to the small remaining forested areas along the northern edge of the property. Development of this property as proposed should have minimal effect on the eastern indigo snake.

The list of potentially present, but not observed listed species is included in Table 5.

Table 5 - Estimated Probability of Occurrence of Non-Observed Listed Wildlife Species on Alico West

Common Name	Scientific Name	Status (FWC/FWS)	Estimated Occurrence			Habitat by FLUCCS
			Probable	Possible	Unlikely	
BIRDS						
White Ibis	*Eudocimus albus*	E/NL	X			520, 742
Snail Kite	*Rostrhamus sociabilis*	E/E	X			520, 742
Limpkin	*Aramus guarauna*	SSC/NL		X		520, 742
Bald Eagle	*Haliaeetus leucocephalus*	T/T		X		520, 411E1, 742
Red-Cockaded Woodpecker	*Picoides borealis*	SSC/E			X	411E1, 411E2, 624E4, 625E3, 625E4
MAMMALS						
Big Cypress Fox Squirrel	*Sciurus niger avicennia*	SSC/NL		X		411E1, 411E2, 624E4, 625E3, 625E4
REPTILES						
Eastern Indigo Snake	*Drymarchon corais couperi*	T/T		X		411E1, 411E2, 624E4, 625E3, 625E4

4.3. Listed Plant Survey

During the course of conducting surveys for listed wildlife species and field mapping vegetative associations, WilsonMiller ecologists searched for plants listed by the Florida Department of Agriculture (FDA) and/or the U.S. Fish and Wildlife Service (FWS). These agencies have categorized the various plant species based upon their relative abundance in natural communities. Those categorizations include "Endangered", "Threatened" and "Commercially Exploited".

Four species of listed plants (per the FDA list) were observed on the project site during the field survey including stiff-leafed wild pine (*Tillandsia fasciculata*), reflexed wild pine (*Tillandsia balbisiana*), giant airplant (*Tillandsia urtriculata*), and butterfly orchid (*Encyclia tampensis*). All of these species were observed in the 621 E3 habitat along the northern edge of the property.

The listed plant species observed and their state and federal listed status are provided in Table 6 below.

Table 6 - Listed Plant Species Observed on Alico West

Common Name	Scientific Name	Status (FDA/FWS)	Habitat by FLUCCS
Reflexed Wild Pine	*Tillandsia balbisiana*	T	624E4, 625E3, 625E4, 621E3
Common Wild Pine	*Tillandsia fasciculata*	E	624E4, 625E3, 625E4, 621E3
Potbelly Air Plant	*Tillandsia paucifolia*	NL	624E4, 625E3, 625E4, 621E3
Giant Air Plant	*Tillandsia utriculata*	E	624E4, 625E3, 625E4, 621E3
Butterfly Orchid	*Encyclia tampensis*	C	624E4, 625E3, 625E4, 621E3

FWS = United States Fish and Wildlife Service
FDA = Food and Drug Administration
E = Endangered
T = Threatened
C = Commercially Exploited
NL = Not Listed
List of potential species was derived from Appendix H in the Lee County Land Development Code.

5. Proposed Conditions

5.1. Project Description

The proposed project includes the construction of residential and commercial facilities designed to support and complement Florida Gulf Coast University. Access between FGCU and the project site will be accomplished via an internal roadway.

5.2. Construction Methods, and Best Management Practices

Construction will be conducted using common equipment such as bulldozers, backhoes, graders, etc. Contractors performing the construction will be required to properly maintain all equipment such that releases of oils, grease, fuels, or other pollutants into preserved wetlands or other surface waters are minimized to the greatest extent practicable. Clean soil (and possibly rocks/boulders in certain instances) which is free of pollutants, as obtained from both on-site and off-site sources, will be used as fill.

During the construction process, appropriate measures will be taken to minimize impacts to preserved wetlands and to water quality. Wetland and upland buffer areas to be preserved will be clearly marked in the field to avoid damage of and intrusion into protected areas. Appropriate construction Best Management Practices will be employed. Prior to commencement of construction near preserved wetlands, including proposed water control structures, erosion control devices will be installed to control and reduce soil erosion, sediment transport and turbidity. Such devices (e.g., straw bale barriers, silt fencing, temporary sediment traps, impoundment areas to control excessive discharges, etc.) will remain in place throughout the duration of construction until construction zones and surrounding areas are stabilized.

Specific erosion control methods/devices used during construction will generally conform with applicable standards set forth in the "FDER Florida Development Manual," Sections 6-301 through

6-500 (FDER. 1988. "The Florida Development Manual: A Guide to Sound Land and Water Management," Chapter 6: "Storm Water and Erosion Control Best Management Practices for Developing Areas; Guidelines for Using Erosion and Sediment Control Practices," ES BMP 1.01-1.67. FDER, Tallahassee, FL.).

A dewatering permit will be obtained prior to construction. Construction de-watering activities will be conducted so that no discharge is allowed to enter the preserved wetlands or completed lakes. Such discharges will also not be allowed to drain off the property. Temporary stockpile areas will be located so that sediments from erosion are prevented from entering the preserved wetlands or the stormwater management lake. Erosion control devices will be employed near stockpiles where necessary. All side slopes adjacent to the preserved areas and lakes will be stabilized following completion of construction by planting grass seed with mulch or sod.

5.3. Impact Assessment

Approximately 63.7 acres of wetlands are located within the subject property, with the majority being located between the inactive mining area and the Alico Road right-of-way, and along the eastern project boundary adjacent to the powerlines. These wetlands exhibit significant melaleuca infestation. Wetlands along Alico Road are separated from the remainder of the site by a high berm. These wetlands receive road runoff from Alico Road. Native wetland areas are located within the eastern and southern portions of the site adjacent to the powerline right-of-way. These wetlands are isolated from offsite flows via berms and roadways and exhibit a high level of exotic infestation.

Under the proposed concept plan, Residential and Office development will be constructed along Alico Road, resulting in impacts to 100% of the wetlands in that location Design features will be incorporated to accommodate flows from the Alico Road right-of-way.

Additionally, the southern wetland located west of the haul road will be impacted as a result of FGCU related development at the southern end of the project site. These wetlands have been severely impacted as a result of past activities on this site which have greatly reduced their wetland functions. As a result, these areas provide limited hydrologic and wildlife value to the surrounding areas.

The remaining wetlands, located along the eastern project boundary, are located within the proposed future CR 951 right-of-way and are identified to remain outside the limits of development.

Wildlife usage on the project site is low, with the majority of site use by listed wading birds. This use is directly related to foraging opportunities provided by the large, onsite lake and associated littoral areas, and not foraging use of the marginal wetlands along the roadway. The lack of onsite habitat for the Florida panther has been acknowledged by the USFWS and is not listed as Primary or Secondary area. Due to the high level of disturbance, the project site does not support prey species for the Florida panther nor Florida Black Bear. No impacts to listed species are anticipated to result from the project.

Currently, the project site contains many wet areas of exotic and nuisance vegetation, the result of intense soil compaction and impounded hydrology of the disturbed areas. Although these areas contain hydrophytic vegetation, they are manmade and have not been classified as wetlands.

The project is not anticipated to pose significant environmental impacts.

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LEE PLAN CONSISTENCY

Population

The request proposes to remove the 919.5+/- acre parcel from the Density Reduction Groundwater Recharge (DRGR) future land use category and extend the University Community future land use designation across the subject property. The University Community future land use designation currently exists on approximately 3,364 acres on and around the Florida Gulf Coast University Campus. Within the University Community future land use designation there are two sub-categories, the Campus category and the University Village category. The subject property is seeking the University Village category designation. The University Community land use designation is described in the Lee Plan as follows:

> ***POLICY 1.1.9:*** *The University Community land use category provides for Florida's 10th University and for associated support development. The location and timing of development within this area must be coordinated with the development of the University and the provision of necessary infrastructure. All development within the University Community must be designed to enhance and support the University. In addition to all other applicable regulations, development within the University Community will be subject to cooperative master planning with, and approval by, the Board of Regents of the State University System.*
>
> *Prior to development in the University Community land use category, there will be established a Conceptual Master Plan which includes a generalized land use plan and a multi-objective water management plan. These plans will be developed through a cooperative effort between the property owner, Lee County, and South Florida Water Management District.*
>
> *Within the University Community are two distinct sub-categories: University Campus and the University Village. The University Window overlay, although not a true sub-category, is a distinct component of the total university environment. Together these functions provide the opportunity for a diversity of viable mixed use centers. Overall average density for the University Village will not exceed 2.5 units per acre. Clustered densities within the area may reach fifteen units per acre to accommodate university housing. The overall average intensity of non-residential development within the University Village will be limited to 10,000 square feet of building area per non-residential acre allowed pursuant to Map 16 and Table 1(b). Specific policies related to the University Community are*

included within the Lee Plan under Goal 18. (Added by Ordinance No. 92-47, Amended by Ordinance No. 94-30, 98-09, 00-22)

As stated in Policy 1.1.9 above, the overall average density for the University Village must not exceed 2.5 units per gross acre over the entire University Village area and can be clustered at up to 15 units per net acre on individual parcels. This density is already anticipated by the Lee Plan as it is allocated specifically to the University Village area and can be developed at any time. Based on Lee County GIS data there are currently 2,604 acres within the University Village designation, equating to a total permitted units of 6,510 (2604 X 2.5) across this designation.

A review of the existing development within the area, entitlements for future development and a review of all approved local Development Orders, documents a surplus of units available in the University Village. Lee County Department of Community Development records document that 3,200 units have been entitled through the approval of Mixed Use Planned Developments (MPD) within the University Village sub-category. This total includes 2,600 units entitled and approved as part of the Miromar and Miromar Lakes development, of which 1,200 have been built to date. Approximately 600 of those units are assigned to the future Miromar development south of the University. The MPD for Gulf Coast Town Center was approved for 600 units, however Development Order records indicate only 408 units were permitted. Those two developments cover the entire University Community, with the exception of a few non-residential uses such as a fire station and several church sites.

Utilizing zoning entitlements and Development Order records the applicant has determined that a minimum of 3,310 units remain available within the University Village sub category.

Total Units Allocated to the University Village sub category
2604 X 2.5 = 6,510

Total Units Entitled within the University Village sub category
2,600 + 600 = 3,200

Total Allocated, Un-entitled Units with University Village sub category
6,510 – 3,200 = **3,310**

As stated above, the subject property is located within the DRGR and Wetland land use designations. The total acreage of the subject property is approximately 919.5 acres, with the wetland portion of the property at approximately 63.7acres. Utilizing these

acreage figures determines what the subject property is entitled to under the existing DRGR designation.

855.8 acres @ 1 unit per 10 acres = 85.58 units
63.7 acres @ 1 unit per 20 acres = 3.18 units

Total units = 88

The amendment does not request the addition of units to the University Community Land Use category but, rather, requests the addition of acreage to that category. Furthermore, the applicant is requesting that 1,950 of the 3310 available units allocated to the University Village category be designated for the subject property through this future land use amendment, resulting in a development of 1,950 dwelling units. These units are assigned to the University Community land use district; specifically within the University Village sub category and therefore the population for this land use designation is already being accommodated on the current Future Land Use map. This will result in a reduction of the 88 units or 224 persons currently accommodated by the Lee Plan in the DRGR category.

Goals, Objectives and Policies

As stated at the top of this document, the subject property is currently located within the Density Reduction Groundwater Recharge (DRGR) future land use category, and is proposed for the University Community land use category. The site is a 919.5+/- acre parcel located on the south side of Alico Road, west of and adjacent to the future County Road 951 extension. The site has approximately 7,265' of frontage on Alico Road, more than 9,600' of frontage on the future County Road 951 extension and contains a large freshwater lake as the result of past mining activities. The site was previously occupied by Florida Rock Industries who until recently, mined and operated a rock crushing plant and asphalt plant on the site since the 1970's. As a result of the mining operations, the site has been completely disturbed over the past 35 years and contains remnants of the mining operation previously located there. As mining operations ceased around the university, the plant previously located here has relocated east to the area where active mining is taking place, leaving this site severely impacted by past activities. This site was permitted well before extensive reclamation plans utilizing re-vegetation were required and therefore site reclamation is limited to bank re-grading.

The proposed re-designation to University Community will present the opportunity for a redevelopment of the site, including on-site water management, wetland restoration and preservation, water quality improvements, extensive landscaping, access control, and

more appropriate uses for the area and adjacent uses. The site is well situated at what will be a prominent intersection in South Lee county (CR 951 & Alico Road), presenting a major opportunity for the development of a "University Village". In addition to it's location at a major intersection, the site is also located in very close proximity to the FGCU campus, allowing for interconnectivity between the two.

The uses proposed for the site are FGCU housing (students and faculty), FGCU support and classrooms, an FGCU Research Park, a mixed use town center with multiple land uses, office uses, a hotel and conference center and residential and recreational uses, all of which will serve to either support those existing university activities or provide new opportunities to the university environment. In addition, a preserve island/rookery will be created in the southern half of the project, presenting an opportunity for the FGCU Environmental Studies program. Students will be able to participate in the planning, construction and maintenance of the preserve/rookery, providing a laboratory in the field for an integrated interdisciplinary educational experience. A second reserve/restoration area in the northerly half of the project also presents that opportunity.

The site's location at this intersection also presents a unique opportunity due to it's' proximity to the Tradeport future land use area to the north across Alico Road. The Tradeport areas are described by the Lee Plan as follows;

> ***POLICY 1.2.2:*** *The Tradeport areas are commercial and industrial lands adjacent to the airport needed to accommodate projected growth through the year 2030. These areas will include developments consisting of light manufacturing or assembly, warehousing, and distribution facilities; research and development activities; laboratories; ground transportation and airport-related terminals or transfer facilities; hotels/motels, meeting facilities; and office uses. Ancillary retail and Corner Store commercial uses, intended to support the surrounding business and industrial land uses, are allowed if they are part of a Planned Development. Future development in this category is encouraged to include a mixture of land uses as described in Policy 2.12.2. Residential uses, other than bona fide caretaker residences, are not permitted in this category except to the extent provided in Chapter XIII of the Plan. Caretaker residences are not permitted in the Airport Noise Zone B. Because this area is located within the Six Mile Cypress Basin and is also a primary point of entry into Lee County, special environmental and design review guidelines will be applied to its development to maintain the appearance of this area as a primary point of entry into Lee County. Property in Section 1 and the east ½ of Section 2, Township 46 South, Range 25 East, and in Section 6, Township 46 South, Range 26 East, must be rezoned to a planned development zoning category prior to any development other than the construction of essential public services. During the*

rezoning process, the best environmental management practices identified on pages 43 and 44 of the July 28, 1993 Henigar & Ray study entitled, Groundwater Resource Protection Study" will be rebuttably presumed to be necessary to protect potential groundwater resources in the area. (Amended by Ordinance No. 94-30, 02-02, 03-04, 04-16, 07-09, 09-06)

The Tradeport areas are intended to provide the Southwest Florida International Airport with areas capable of accommodating needed commercial and industrial lands through the year 2030. The specific uses slated for the Tradeport areas consist of manufacturing, warehousing, distribution, research and development, as well as laboratories and office space. The Florida Gulf Coast University Lutgert College of Business is well positioned to take advantage of its close proximity to this area through relationships or partnerships with businesses having facilities in this area. Because the subject property is slated to contain a mix of FGCU uses and private enterprise uses, the development and physical location of the subject property provides the opportunity for physical and operational integration between the college and the future Tradeport areas to the north.

A physical connection to the university has not been specifically identified on the site plan. However, the preliminary design for the future CR 951 provides the opportunity to make a connection between the subject property and FGCU. As an alternative or in addition thereto, there is the opportunity along the southern property line of the subject property to create an ingress and egress point between the subject property and the FGCU campus, as shown on the attached Florida Gulf Coast University 2005 Master Plan Update (attached). This connection is identified on the Master Plan as a future functional linkage for vehicular traffic and creates the opportunity for a multimodal transportation system, utilizing alternatives to the automobile. A physical connection could be accomplished between the two sites, immediately east of the FGCU baseball/softball complex, along an existing berm located on the southern side of the existing lake. A 60' wide easement for ingress and egress exists in this very location and matches up with the access shown on the FGCU 2005 Master Plan update. This 60' wide area would be well buffered from Miromar Lakes to the north, offers the closest connection between the two sites and as evidenced on the aerial photograph this area has already been impacted. This connection could provide access from FGCU to both CR 951 and to the subject property, utilizing an area previously disturbed by development activities. In addition, this would provide access to the adjacent wetland system/flowway traversing the campus, and perhaps offering additional educational opportunities. The connection would be accomplished utilizing state of the art environmental engineering techniques and involve the University's Environmental Engineering program. Due to the connection location adjacent to an

existing wetland system, the project presents the opportunity to study stormwater runoff quality and maintenance of the system.

As stated above, the current designation of the subject property is DRGR, described in the Lee Plan (current language) as follows:

> ***POLICY 1.4.5:*** *The Density Reduction/Groundwater Resource (DR/GR) areas include upland areas that provide substantial recharge to aquifers most suitable for future wellfield development. These areas also are the most favorable locations for physical withdrawal of water from those aquifers. Only minimal public facilities exist or are programmed. Land uses in these areas must be compatible with maintaining surface and groundwater levels at their historic levels. Permitted land uses include agriculture, natural resource extraction and related facilities, conservation uses, publicly-owned gun range facilities, private recreation facilities, and residential uses at a maximum density of one dwelling unit per ten acres (1 du/10 acres). Individual residential parcels may contain up to two acres of Wetlands without losing the right to have a dwelling unit, provided that no alterations are made to those wetland areas. Private Recreational Facilities may be permitted in accordance with the site location requirements and design standards, as further defined in Goal 16. No Private recreational facilities may occur within the DR/GR land use category without a rezoning to an appropriate planned development zoning category, and compliance with the Private Recreation Facilities performance standards, contained in Goal 16 of the Lee Plan. (Amended by Ordinance No. 91-19, 94-30, 99-16, 02-02)*

As shown on the attached aerial photographs, the 919 acre site is a combination of land area and lake area. Of the total site, approximately 350 acres were never mined, while the remainder of the site resulted in uplands being excavated and a lake created. The attached Species Survey indicates there are no issues with prot4cted species due to a lack of habitat on the site. Any species currently using the site, such as wading birds or alligators, will be unaffected by the project. Reclamation associated with the site will only serve to enhance the habitat required by these species. The majority of the uplands left after mining are covered by "fines", a by-product of the aggregate production. As a result, the subject parcel does not contain any uplands that provide substantial aquifer recharge and the historic mining activities on the site have been shut down. Test borings on the remainder of the site indicate that there are no commercially valuable natural resources left to be mined. The remainder of the site contains overburden or "fill dirt" and is no more valuable than any other borrow pit site in Lee County.

If the site were to remain in the DRGR category there are no requirements or incentives to accomplish reclamation of the abandoned mining operation. The mining operation was begun well before any permit requirements for reclamation, therefore when the mining operation ceased, the site was abandoned and the existing lake left in its current state. In order to restore some of the ecological benefits lost during the mining process and to help provide for improved water quality, reclamation is proposed during the redevelopment activities. In addition to removing the "fines", the lake banks will be reshaped, littoral shelves with wetland vegetation installed, a preserve/rookery island will be created, upland re-vegetation will occur and an upland stormwater management system will be installed, all providing for increased water quality and the lake's overall better health.

The redevelopment of this site as a part of the University Community will serve to provide consistency with Lee Plan Objective 2.1, below:

> ***OBJECTIVE 2.1: DEVELOPMENT LOCATION.*** *Contiguous and compact growth patterns will be promoted through the rezoning process to contain urban sprawl, minimize energy costs, conserve land, water, and natural resources, minimize the cost of services, prevent development patterns where large tracts of land are by-passed in favor of development more distant from services and existing communities. (Amended by Ordinance No. 94-30, 00-22)*

This site has been previously developed as a mining operation since the 1970's rendering the site useless for anything else in its current state. A review of the aerial photographs demonstrates that this site is located in a developing area, between the Southwest Florida International Airport and FGCU and that there are no large tracts of land being by-passed to reach this development. With the location of Alico Road to the north, proposed CR 951 to the east and Miromar Lakes to the south and west, the project represents "infill", creating a contiguous, compact development.

> ***POLICY 2.4.2:*** *All proposed changes to the Future Land Use Map in critical areas for future potable water supply (Bonita Springs as described in Policy 1.7.10; Lehigh Acres as described in Policy 54.1.9; and all land in the Density Reduction/ Groundwater Resource land use category) will be subject to a special review by the staff of Lee County. This review will analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water sources, and will assess whether the proposed land uses would cause any significant impact on present or future water resources. If the Board of County Commissioners wishes to approve any such changes to the Future Land*

Use Map, it must make a formal finding that no significant impacts on present or future water resources will result from the change.
(Amended by Ordinance No. 92-47, 94-30, 00-22, 02-02)

Policy 2.4.2 requires the Lee County Board of Commissioners to make a formal finding that no significant impacts to present or future water resources will result from a land use change in the DRGR. The policy also requires Lee County staff to perform a review of the availability of irrigation and domestic water sources, and the effect of the request on those resources, as specified in Policy 2.4.3. below.

POLICY 2.4.3: *Future Land Use Map Amendments to the existing DR/GR areas south of SR 82 east of I-75, excluding areas designated by the Port Authority as needed for airport expansion, which increase the current allowable density or intensity of land use will be discouraged by the county. It is Lee County's policy not to approve further urban designations there for the same reasons that supported its 1990 decision to establish this category. In addition to satisfying the requirements in 163 Part II Florida Statutes, Rule 9J-5 of the Florida Administrative Code, the Strategic Regional Policy Plan, the State Comprehensive Plan, and all of the criteria in the Lee Plan, applicants seeking such an amendment must:*
1. Analyze the proposed allowable land uses to determine the availability of irrigation and domestic water sources; and,
2. Identify potential irrigation and domestic water sources, consistent with the Regional Water Supply Plan. Since regional water suppliers cannot obtain permits consistent with the planning time frame of the Lee Plan, water sources do not have to be currently permitted and available, but they must be reasonably capable of being permitted; and,
3. Present data and analysis that the proposed land uses will not cause any significant harm to present and future public water resources; and,
4. Supply data and analysis specifically addressing the urban sprawl criteria listed in Rule 9J- 5.006(5) (g), (h), (i) and (j), FAC.
During the transmittal and adoption process, the Board of County Commissioners must review the application for all these analytical requirements and make a finding that the amendment complies with all of them. (Added by Ordinance No. 97-05)

The proposed land uses for the subject property, retail, residential, office and university related development, have been evaluated for water use and that calculation is included in the Public Facilities Analysis attached to the application. In addition, this application requests amendments to the Lee County Utilities Water and Sanitary Sewer Service areas (Lee Plan Maps 6 & 7) to incorporate the entire subject property. At this time, the

northern portion of the subject property is located within the water service franchise area; however the sanitary sewer service area ends at the subject property's north property line. The service area boundaries currently exclude the former mining area; creating "a hole" in the service area. The amendment would move both service area boundaries to the project's south property line, providing for a uniform, compact service are boundary. A review of the Lee County Concurrency Report indicates that sufficient water and sewer capacity is available through Lee County Utilities, which was confirmed in an availability letter attached to the original application. Therefore because the project will connect to a sanitary sewer system and public water system, there will no adverse impact to future public water resources, due to additional impacts created by this project.

A review of Lee Plan Map 8, Well Field Cones of Influence indicates the subject property is not located within close proximity to any permitted public water supply wells. The closest plant is the Three Oaks plant and a very small portion of the westernmost uplands on the subject property fall within the Ten Year Travel Time for that Cone of Influence, pursuant to Map 8. Remnants of the mining operation will be removed with the change in land use, including the "fines by-product" created by the mine. A detailed description of the existing conditions on site is included in the attached geotechnical investigation report from CDM. The report contains information on existing subsurface conditions, as well as an investigation of the mining residue (fines) found over a significant portion of the site. The thickness of the residue to be excavated ranges from 8.5' to 69.5' deep in the test borings contained in the report. A storm water management system will be installed, and compliance with well field protection regulations will insure enhanced water quality for surface water and groundwater leaving the site, providing for no adverse impacts to public water resources, per Policy 2.4.3., above.

Lee County Utilities does not have reuse lines in this area; therefore irrigation will utilize the existing on-site lake. The existing lake will provide the irrigation volume necessary to sustain a Florida native based landscape design. In addition the Florida native design featuring drought tolerant landscaping, will require less lawn maintenance and will reduce energy consumption. Lastly, no water usage will occur in connection with the terminated mining operation, thus reducing the sites overall consumption.

The multi use development proposed for the subject property will feature a variety of commercial, residential and office uses. Future FGCU housing will be located in the southerly portion of the project, adjacent to a FGCU Research Facility also planned for the project. In addition, the project will feature a downtown, main street area providing access to the offices, residences and commercial uses planned for the Town Center. In addition, a hotel and conference center, marinas, beach parks, preserve/restoration

areas and a variety of residential units will be located along the perimeter of the Town Center. This type of design will create the connectivity or walkability desired to achieve a cohesive, viable development. In addition, the project will be served by a variety of sidewalks, bike paths and trails intended to create a pedestrian oriented development that blends into the university community to the south. In addition those details provide consistency with Policy 2.12.1 below;

> ***POLICY 2.12.1:*** *The County encourages and promotes clustered, mixed use development within certain Future Urban Area land use categories to spur cluster development and smart growth within those areas of Lee County where sufficient infrastructure exists to support development, as well as continue to improve the economic well-being of the County; provide for diversified land development; and provide for cohesive, viable, well-integrated, and pedestrian and transit oriented projects. This is intended to encourage development to be consistent with Smart Growth principles.(Added by Ordinance No. 09-06)*

Those smart growth principals were utilized to prepare the Conceptual Master Plan attached to this application. The physical and natural features of this site dictate the placement of all uses due to the location of FGCU and the large lake existing on the site. The conceptual plan proposes uses which have been functionally oriented to ensure capability and incorporation between the private development and the FGCU parcel, while also being appropriately related to protect the natural features of the site.

> ***POLICY 4.1.1:*** *Development designs will be evaluated to ensure that land uses and structures are well integrated, properly oriented, and functionally related to the topographic and natural features of the site, and that the placement of uses or structures within the development minimizes the expansion and construction of street and utility improvements. (Amended by Ordinance No. 91-19, 00-22)*

The street system design within the development will provide access to and from Alico Road, future CR 951 and the FGCU campus. The FGCU connection (discussed on page 4) will be provided with pedestrian and bicycle access intended to encourage alternatives forms of transportation and will provide for efficient and safe flow of vehicles to and from the site, pursuant to Policy 4.1.2, below;

> ***POLICY 4.1.2:*** *Development designs will be evaluated to ensure that the internal street system is designed for the efficient and safe flow of vehicles and pedestrians without having a disruptive effect on the activities and functions contained within or adjacent to the development. (Amended by Ordinance 91-19, 00-22)*

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The subject property is located adjacent to the Miromar Lakes residential development, located on the south side of the lake on the subject property. As you can see from the Conceptual Plan, all uses located directly on or adjacent to the lake are residential, marina or park uses, with the more intense town center and office uses located on the northern and eastern boundaries, adjacent to Alico Road and proposed CR 951. A large preserve/restoration island is also proposed for the southern portion of the lake, effectively buffering the site. The placement of the proposed uses on the site, together with the preserve island will serve to protect any existing residential uses from any encroachment of future uses.

> ***POLICY 5.1.5:*** *Protect existing and future residential areas from any encroachment of uses that are potentially destructive to the character and integrity of the residential environment. Requests for conventional rezonings will be denied in the event that the buffers provided in Chapter 10 of the Land Development Code are not adequate to address potentially incompatible uses in a satisfactory manner. If such uses are proposed in the form of a planned development or special exception and generally applicable development regulations are deemed to be inadequate, conditions will be attached to minimize or eliminate the potential impacts or, where no adequate conditions can be devised, the application will be denied altogether. The Land Development Code will continue to require appropriate buffers for new developments. (Amended by Ordinance No. 94-30, 99-15, 00-22)*

The commercial portion of the project is generally slated for the northeast corner of the subject property, well isolated from the existing residential usage to the south. All property within the University Community must undergo a Development of Regional Impact Review, pursuant to Policy 18.2.2 and will be a planned development. The commercial portion of the development will be provided with a common architectural theme, extensive buffering and proper orientation of structures on the site. This design is intended to be that of a traditional neighborhood, providing for connectivity and walkability between FGCU and the surrounding developments. This main street concept will create a downtown FGCU area, connected to both the Tradeport area and the existing campus. The provision of pedestrian and bicycle access from the campus to the downtown area will promote pedestrian activity within the development and thus reduce dependence on the automobile. The location and orientation of the commercial portions of the site, the provision of buffering and the elimination of the mining use on the site well ensure the avoidance of negative impacts on surrounding land uses, as required below;

> ***POLICY 6.1.3:*** *Commercial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as commercial planned developments designed to arrange uses in an integrated and cohesive unit in order to:*
> *• provide visual harmony and screening;*
> *• reduce dependence on the automobile;*
> *• promote pedestrian movement within the development;*
> *• utilize joint parking, access and loading facilities;*
> *• avoid negative impacts on surrounding land uses and traffic circulation;*
> *• protect natural resources; and*
> *• provide necessary services and facilities where they are inadequate to serve the proposed use.*
> *(Amended by Ordinance No. 94-30, 00-22)*

Lee County Comprehensive Plan Goal 18 specifically addresses FGCU and the surrounding development to insure that any proposed land uses do not interfere with, disrupt or impede the efficient operation of the university. The applicant has demonstrated, consistent with Goal 18, that the proposed development enhances the operation of the University.

> ***GOAL 18: UNIVERSITY COMMUNITY.*** *In order to ensure that development within he University Community land use category protects and enhances the ability of Florida's tenth university to provide secondary education as described in the Mission Statement of that institution and to assure that land uses or development activities do not interfere with, disrupt, or impede the efficient operation of that institution the following Objectives and Policies will apply to all development within the University Community land use category. The Application (Volume 1 of 2) (1992) and the Support Document (Volume 2 of 2) (1992) to the Amendment to the Lee County Comprehensive Plan for the University Community is incorporated by reference herein as a resource and information document. (Added by Ordinance No. 92-47, Amended by Ordinance No. 94-30, 00-22)*

The applicant is cooperating with FGCU staff regarding the timing and location of development for the subject property, proposed for the University Village designation. The applicant has insured the availability of all necessary infrastructures, including water, sewer, roads and drainage, as required by Objective 18.1, and the subsequent policies as shown on the attached Public Facilities analysis.

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> ***OBJECTIVE 18.1: FUTURE LAND USE.*** *In order to ensure that the location and timing of development within the University Community is coordinated with the development of the University and the provision of necessary infrastructure; and, that all associated support development within the University Community is designed to enhance the University; all development within the University Community will be subject to cooperative master planning which must conform to the following policies. (Amended by Ordinance No. 00-22)*

The Conceptual Plan and application materials submitted with this application demonstrate compliance with Policy 18.1.1., below, through the provision of the university related scientific research and development facilities. A review of an aerial photograph shows that this is the only parcel of land around the university situated such that direct access to the campus could be obtained to help create the synergy required for a project designed to enhance the university. The most southerly portion of the subject property is slated for FGCU related housing for graduate students, professors and administrators, within walking distance of the campus. Immediately adjacent to the north is a proposed FGCU Research Park, intended for the research and development activities as set forth below. The position of the subject property adjacent to the Tradeport area will only further the ability of Lee County to promote public/private initiatives and partnerships with FGCU to obtain the economic diversification anticipated by this policy.

> ***POLICY 18.1.1:*** *Lee County will, through public and private economic and business development initiatives, promote the University Community as a catalyst for economic diversification and the promotion of employment throughout Lee County and the Region. Within the University Community land use category the focus of this endeavor (the emphasis) will be on university related scientific research and high technology development activities. (Amended by Ordinance No. 00-22)*

The Conceptual Plan submitted with the application also depicts several residential development pods, ranging from the FGCU housing in the southerly portion of the property, to the lake front development in the northerly end of the project. Utilizing smart growth principles the project intends to provide a variety of housing types, sizes and price points, insuring a diversity of housing products and expanded choices for the consumer. By providing quality housing for people of all income levels the project can accommodate students, faculty, administration, as well as university support personnel, as required by Policy 18.1.2.

> ***POLICY 18.1.2:*** *The University Community will provide a mix of housing types with densities sufficient to meet the needs of and designed to accommodate the varying lifestyles of students, faculty, administration, other university personnel and employees of the associated support development. (Amended by Ordinance No. 00-22)*

As specified in the Lee Plan, overall gross density within the University Community is 2.5 acres per unit with up to 15 net units per acres on individual development parcels. The Lee Plan also requires all development within the University Community to undergo a DRI review, as well as planned development rezoning. It is through the planned development process that Lee County evaluates densities for individual parcels, providing a mechanism for clustering. The applicant will proceed through the planned development rezoning process to determine density on a parcel by parcel basis. In addition, the applicant has provided a detailed listing of all development entitled, permitted or constructed within the University Community and that information is attached for verification, as required below.

> ***POLICY 18.1.4:*** *Lee County will maintain and as necessary adopt regulations further defining how densities for individual parcels within the University Community will be determined. The regulations will address how the total number of units will be tallied to insure that the overall average density of 2.5 units an acre will be maintained. The regulations will provide a mechanism for clustering densities within the University Community. (Amended by Ordinance No. 00-22, 07-12)*

The applicants proposed development will create a balanced mixture of uses intended to reduce overall trip lengths, to support pedestrian, bicycle and transit opportunities and create pedestrian friendly streetscapes. The Conceptual Plan provides for outdoor livability, including interconnected pedestrian and bike facilities, walkways, public plazas, street furniture, and walkable block size. By linking pedestrian routes and bikeways with the street system or other public space such as parks, the development will encourage pedestrian and bicycle- friendly access, with access to the development and the surrounding community. Streets will be provided with design features including sidewalks which define and contribute to a pedestrian street character. Building design, placement, and entrances will be at a pedestrian scale and oriented towards streets or other public space such as parks or squares. Lastly, existing Lee Tran routes can be extended to the subject property, providing for mass transit opportunities linking the University Community to the remainder of the county, while the FGCU campus Eagle Express shuttle can provide transit opportunities within the University Community. In addition, the lake presents an opportunity for a future water taxi service, available to students and adjacent developments for access to the proposed downtown area.

These features and details will be confirmed by the university through the required Campus Master Plan update, required by this application, as specified by Policies 18.1.5 and 18.1.6 below.

> ***POLICY 18.1.5:*** *In order to create a cohesive community, site design within the University Community must utilize alternative modes of transportation such as pedestrian networks, mass transit opportunities, sidewalks, bike paths and similar facilities. Site design must link related land uses through the use of alternative modes of transportation thus reducing automobile traffic within the University Community. The county will work cooperatively with the University on these matters as the University proceeds through the Campus Master Plan Process. (Amended by Ordinance No. 94-30, 00-22)*

> ***POLICY 18.1.6:*** *Lee County will facilitate mass transit opportunities connecting the University Community to other parts of the county, in accordance with the goals, objectives, and policies of the Mass Transit element. (Amended by Ordinance No. 94-30, 00-22)*

As specified throughout the application, the project does propose a diverse mixture of land uses on this site, as opposed to other existing development within the University Community. The majority of the existing development within the University Community consists of a private mixed use residential, golf course development, containing a significant amount of single family units and generally not catering to the student body, faculty or support staff of the university. Additionally, Gulf Coast Town Center is a regional shopping mall utilizing a big box development pattern providing shopping, dining and entertainment facilities within the University Community area. While this area does provide commercial and student employment opportunities within the University Community area, it is somewhat removed from the campus and outside of walking distance criteria and does not function as a university downtown area as contemplated by the Campus Master Plan. Vacant property south of the University Community is owned by the Miromar Lakes developer and is approved for similar low density residential development and a golf course. This parcel represents the only undeveloped, contiguous parcel to the University Community with the ability to accomplish what the Campus Master Plan intended for the University Community designation.

> ***POLICY 18.1.7:*** *A diverse mixture of land uses will be encouraged within the University Community. Compatibility will be addressed through project design, including adequate buffering or other performance measures, therefore allowing adjacent appropriate industrial, residential and commercial land uses where such locations represent good planning. In reviewing zoning requests within the*

University Community, Lee County will consider noise, odor, visual, security, and traffic impacts in determining land use compatibility. Because of the required cooperative master planning with and approval by the Board of Regents, the required compatibility review and the requirement that commercial land uses within the University Village be related to the University, development within the University Community will not be subject to the site location standards set forth in Goal 6 of the Lee Plan. (Amended by Ordinance No. 94-30, 00-22)

POLICY 18.1.9: *Prior to the commencement of development within the University Community land use category, an area-wide Conceptual Water Management Master Plan must be submitted to and approved by Lee County and South Florida Water Management District staff. This water management plan will be integrated with the Conceptual Master Plan and be prepared through a cooperative effort between the property owner, Lee County, and South Florida Water Management District. This master plan will insure that the water management design of any development within the University Community will maintain or improve the currently existing quality and quantity of groundwater recharge. This plan must be consistent with the drainage basin studies that were prepared by Johnson Engineering, and approved by the SFWMD. Lee County will amend the county land development regulations to require all new development to be consistent with the appropriate basin study. (Amended by Ordinance No. 94-30, 00-22)*

Several policies within the Lee Plan require the applicant to amend the University Community Conceptual Master Plan as well as the Campus Master Plan in conjunction with the university and the Board of Regents. While the Board of Regents no longer exists, we will be working with the FGCU Board of Trustees to accomplish that amendment. The University Community Conceptual Master Plan is proposed to be amended by adding a ninth area to the plan, incorporating the subject property into the University Village, providing for consistency with Policies 18.1.10. and 18.1.11., below.

POLICY 18.1.10: *Development within the University Community land use category will be consistent with the Generalized Land Use Map and the eight area descriptions contained on or between pages 6 through 10 of the University Community Conceptual Master Plan, dated April 1994. (Amended by Ordinance No. 94-30)*

> ***POLICY 18.1.11:*** *If not otherwise addressed by the Conceptual Master Plan, the landowner(s) within the University Village will coordinate infrastructure connections and interconnections, including but not limited to roadways, utilities and water management, with the University Campus through the established Board of Regents' master planning, review and approval process. (Amended by Ordinance No. 00-22, Relocated by Ordinance No. 07-12)*

The Conceptual Plan submitted with this application demonstrates compliance with Policy 18.1.12. While there are no pristine areas remaining on the site due to previous development, the applicant has proposed a preservation/restoration island intended to serve as a bird rookery and a study site for the FGCU Environmental Studies program. In addition to another preserve area located in the northern end of the property, the physical interconnection to FGCU adjacent to a major flow way, presents an opportunity to the Engineering school to participate in the design, construction and study of a state of the art environmental design for the connection.

> ***POLICY 18.1.12:*** *To encourage a variety of wildlife habitats and university study sites, special consideration will be given in the Conceptual Master Plan to the preservation of portions of the most pristine and diverse wildlife habitat areas (such as, pine flatwoods, palmetto prairies, and major cypress slough systems) as an incentive to reduce, on a one-for-one basis, open space requirements in other developments within the University Community. The implementation of this policy will occur at the time of zoning and development review. (Amended by Ordinance No. 94-30, 00-22, Relocated by Ordinance No. 07-12)*

The applicant has contacted Lee County Utilities regarding the provision of water and sewer service. While water service exists in the adjacent Alico Road right of way, sewer lines are slated to be installed with the expansion of Alico Road and the development of the Tradeport areas to the north. The project will also comply with the recommendations of the Estero Basin study. The applicant will be responsible for the provision and expansion of service and thus comply with Policy 18.1.14. and 18.1.15 below.

> ***POLICY 18.1.14:*** *The cost for the provision and expansion of facilities for potable water and sanitary sewer that benefits development in the University Community will be borne by those who benefit. Such funding may include (but is not limited to) outright construction by the developer, special taxing or benefit districts, or Uniform Community Development Districts (Chapter 190, F.S.). The cost for these types of improvements will not be born by the county. (Added by Ordinance No. 94-30, Amended by Ordinance No. 00-22, Relocated by Ordinance No.07-12)*

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> ***POLICY 18.1.15:*** *The cost for the provision and expansion of facilities necessary to comply with the recommendations of the Estero Basin that benefits development in the University Community will be borne by those who benefit. Such funding may include (but is not limited to) outright construction by the developer, special taxing or benefit districts, or Uniform Community Development Districts (Chapter 190, F.S.). The cost for these types of improvements will not be borne by the county. (Added by Ordinance No. 94-30, Amended by Ordinance No. 00-22, Relocated by Ordinance No. 07-12)*

The applicant is requesting a re-designation to University Community, specifically to the University Village sub district. In addition the applicant proposes to amend the University Window Overlay as well.

> ***OBJECTIVE 18.2: UNIVERSITY COMMUNITY SUB-CATEGORIES.*** *The University Community meets an educational infrastructure need for the Southwest Florida five county area by providing the necessary and appropriate land uses to carry out the mission of Florida's 10th University as stated by the Board of Regents. Within the University Community land use category there are two distinct sub-categories: University Campus and the University Village. The University Window overlay is also a part of the University Community land use category. (Amended by Ordinance No. 94-30)*

As stated above, the applicant is requesting to be included within the University Village sub-area and has proposed the types of uses desired to create a viable university community. The projects location between the FGCU campus and the Tradeport areas provide the only remaining opportunity for a sustainable development within the University Community. Providing the necessary support residential and commercial within close proximity to the campus and creating a connected, walkable community will create the synergy necessary enhance the university function; as required by Policy 18.2.2.

> ***POLICY 18.2.2:*** *The University Village is an area which provides the associated support development and synergism to create a viable University Community. This sub-category allows a mix of land uses related to and justified by the University and its development. Predominant land uses within this area are expected to be residential, commercial, office, public and quasi-public, recreation, and research and development parks. In addition to complying with the Conceptual Master Plan required by Policy 18.1.10, all property within the University Village must undergo a Development of Regional Impact review. (Amended by Ordinance No. 00-22)*

The applicant also proposes to extend the University Overlay to include the subject property's frontage on Alico Road. The current overlay includes Treeline (Ben Hill Griffin) Avenue from Alico Road to Corkscrew Road, as well as several road segments intersecting with Treeline Avenue. The applicant would propose to extend the overlay along Alico Road, from the intersection of Alico and Treeline, easterly to the future intersection with CR 951. As CR 951 is constructed, traffic patterns in the area will change, creating an additional route to reach the University from the south and the need for architectural standards. These standards are subject to agreement with all affected property owners, as specified below.

> ***POLICY 18.2.3:*** *The University Window Overlay includes the area within 100 feet on both sides of the right-of-way of the following roadway segments:*
> ***Treeline Avenue*** *from Alico Road to Corkscrew Road*
> ***Alico Road*** *from I-75 to Treeline Avenue*
> ***Corkscrew Road*** *from I-75 to Treeline Avenue*
> ***Koreshan Boulevard*** *from I-75 to Treeline Avenue*
> *With input from affected property owners, Lee County and the Board of Regents will develop mutually agreed upon standards for the University Window addressing landscaping, signage and architectural features visible from the designated roadway segments. (Amended by Ordinance No. 00-22, 07-12)*

Adjacent Local Governments

The subject property is located entirely within Lee County and is not located adjacent to any other local government. As required by Policy 18.1.10, all development within the University Community must be consistent with the University Community Master Plan. The applicant is working with the adjacent University and the Board of Regents to ensure consistency with a revised University Community Master Plan.

State Comprehensive Plan

There are several goals and policies from the State Comprehensive Plan that are generally applicable to this project. The majority of the standards contained within the State and Regional Plans required action by the state or local government.

> ***(7) WATER RESOURCES.--***
>
> *(a) Goal.--Florida shall assure the availability of an adequate supply of water for all competing uses deemed reasonable and beneficial and shall maintain the functions of natural systems and the overall present level of surface and ground*

water quality. Florida shall improve and restore the quality of waters not presently meeting water quality standards.

4. Protect and use natural water systems in lieu of structural alternatives and restore modified systems.

5. Ensure that new development is compatible with existing local and regional water supplies.

10. Protect surface and groundwater quality and quantity in the state.

11. Promote water conservation as an integral part of water management programs as well as the use and reuse of water of the lowest acceptable quality for the purposes intended

The project is located within a Density Reduction Groundwater Recharge land use designation and as such is required to address water supply and water quality as required by Policies 2.4.2 and 2.4.3. This review must address availability of water for irrigation and domestic use, as well as the existing sources and possible contamination sources. In addition the project is designed to restore a portion of the natural system on site and to reclaim areas disturbed by mining, including lake banks and slopes. All plumbing fixtures within the proposed development will be of a water saving variety, xeriscape principals will be utilized and turf areas will be limited, all promoting water conservation. Reuse irrigation is not available at this time.

(9) NATURAL SYSTEMS AND RECREATIONAL LANDS.--

(a) Goal.--Florida shall protect and acquire unique natural habitats and ecological systems, such as wetlands, tropical hardwood hammocks, palm hammocks, and virgin longleaf pine forests, and restore degraded natural systems to a functional condition.

1. Conserve forests, wetlands, fish, marine life, and wildlife to maintain their environmental, economic, aesthetic, and recreational values.

7. Protect and restore the ecological functions of wetlands systems to ensure their long-term environmental, economic, and recreational value.

The site has been occupied by a mining operation, over the past 35 years, and is almost entirely disturbed. Two small areas containing suitable indigenous vegetation will be conserved and restored to create viable wetland systems, possible for use by FGCU's Environmental Education department.

(11) ENERGY.--

(a) Goal.--Florida shall reduce its energy requirements through enhanced conservation and efficiency measures in all end-use sectors, while at the same time promoting an increased use of renewable energy resources.

4. Ensure energy efficiency in transportation design and planning and increase the availability of more efficient modes of transportation.

(a) Goal.--Florida shall protect its air, land, and water resources from the adverse effects of resource extraction and ensure that the disturbed areas are reclaimed or restored to beneficial use as soon as reasonably possible.

3. Require that disturbed areas, except those selected to be reclaimed by nature, be reclaimed to productive and beneficial use within a period determined by the state to be reasonable and practical.

The project is proposing to provide a multimodal transportation system, utilizing Lee Tran, the University bus system, bicycles and an extensive pedestrian network. All of these alternative types of transportation will reduce dependence on the automobile and serve to reduce overall energy demands.

(13) MINING.--

(a) Goal.--Florida shall protect its air, land, and water resources from the adverse effects of resource extraction and ensure that the disturbed areas are reclaimed or restored to beneficial use as soon as reasonably possible.

3. Require that disturbed areas, except those selected to be reclaimed by nature, be reclaimed to productive and beneficial use within a period determined by the state to be reasonable and practical.

6. Minimize the effects of resource extraction upon ground and surface waters.

The site was first developed as a mining operation in the 1970's, well before any restoration standards were developed. As a result the site was abandoned when the mining ceased, leaving the site covered with a by product on the rock crushing (fines), leftover piles of material and almost completely devoid of vegetation. By allowing the redevelopment of a obviously disturbed site, there is the opportunity to provide restoration and reclamation, including lake bank regrading and re-vegetation,; effectively minimizing the effects of mining on ground and surface waters.

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(15) LAND USE

(a) *Goal.*--In recognition of the importance of preserving the natural resources and enhancing the quality of life of the state, development shall be directed to those areas which have in place, or have agreements to provide, the land and water resources, fiscal abilities, and service capacity to accommodate growth in an environmentally acceptable manner.

3. Enhance the livability and character of urban areas through the encouragement of an attractive and functional mix of living, working, shopping, and recreational activities.

6. Consider, in land use planning and regulation, the impact of land use on water quality and quantity; the availability of land, water, and other natural resources to meet demands; and the potential for flooding.

7. Provide educational programs and research to meet state, regional, and local planning and growth-management needs.

The project does propose a diverse mixture of land uses on this site, as opposed to other existing development within the University Community. The uses proposed for the site include FGCU faculty and students housing, FGCU educational facilities, an FGCU Research and Development Park, a office park, a hotel and conference center, a marina/beach area, preserve/rookery areas and several residential unit types. In addition to those uses, a mixed use town center is planned to serve as a University downtown area. The town center will contain various retail and service oriented uses, as well as numerous public spaces intended to foster interaction.

The existing use of a mining operation has severely impacted the property and therefore the reclamation of the site and conversion to an urban land use will only serve to improve water quality within the on-site lake and therefore runoff leaving the site. The land here is being reclaimed, with the byproduct (fines) being cleaned up and the site re-vegetated making good use of previously disturbed property.

A preserve island/rookery will be created in the southern half of the project, presenting an opportunity for the FGCU Environmental Studies program. Students would be able to participate in the planning, construction and maintenance of the preserve/rookery, providing a laboratory in the field for an integrated interdisciplinary educational experience. A second reserve/restoration area in the northerly half of the project also presents that opportunity.

(19) TRANSPORTATION.--

a) Goal.--Florida shall direct future transportation improvements to aid in the management of growth and shall have a state transportation system that integrates highway, air, mass transit, and other transportation modes.

8. Encourage the construction and utilization of a public transit system, including, but not limited to, a high-speed rail system, in lieu of the expansion of the highway system, where appropriate.

The project proposes to provide a multimodal transportation system, linking FGCU and the subject property with an integrated public transit system. In addition to a vehicular connection, a pedestrian and bicycle path system will be provided and connected to the campus system of boardwalks. Bus service can be provided with the addition of a Lee Tran stop intended for the site, connecting to the existing Lee Tran Route serving the University and through the use of the FGCU Eagle express shuttle bus service.

(21) THE ECONOMY.--

(a) Goal.--Florida shall promote an economic climate which provides economic stability, maximizes job opportunities, and increases per capita income for its residents.

(b) Policies.--

1. Attract new job-producing industries, corporate headquarters, distribution and service centers, regional offices, and research and development facilities to provide quality employment for the residents of Florida.

6. Promote economic development for Florida residents through partnerships among education, business, industry, agriculture, and the arts.

8. Promote economic self-sufficiency through training and educational programs which result in productive employment.

The site is proposed to house an FGCU Research and Development Park, in addition to numerous private enterprise businesses within the business park, immediately south of the Tradeport land use designation along Alico Road. The Tradeport areas are intended to provide the Southwest Florida International Airport with areas capable of accommodating needed commercial and industrial lands through the year 2030. The specific uses slated for the Tradeport areas consist of manufacturing, warehousing, distribution, research and development, as well as laboratories and office space. The Florida Gulf Coast University Lutgert College of Business is well positioned to take advantage of its close proximity to this area through relationships or partnerships with businesses having facilities in this area. Because the subject property is slated to

contain a mix of FGCU uses and private enterprise uses, the development and physical location of the subject property provide the opportunity for physical and operational integration between the college and the future Tradeport areas to the north.

Regional Policy Plan

Housing Element

Goal 2: Southwest Florida will develop (or redevelop) communities that are livable and offer residents a wide range of housing and employment opportunities.

Action 2: Work with local governments to promote structures and developments that combine commercial and residential uses as a means of providing housing that is affordable and near employment opportunities.

The project does propose a diverse mixture of land uses on this site, as opposed to other existing development within the University Community. The uses proposed for the site include FGCU faculty and students housing, FGCU educational facilities, an FGCU Research and Development Park, a office park, a hotel and conference center, a marina/beach area, and several residential unit types. In addition to those uses, a mixed use town center is planned to serve as a University downtown area. The town center will contain various retail and service oriented uses, as well as numerous public spaces intended to foster interaction. Housing for FGCU students and faculty will provide housing within walking distance of employment opportunities for both.

Economic Development Element

Goal 1: A well-maintained social, health, and educational infrastructure to support business and industry.

Strategy: Continually improve the educational system to produce an educated and trained work force.

Actions: 3. Review proposed development for impacts on and opportunities to provide needed educational facilities and services.

Goal 2: A well-educated, well-trained work force.

Strategy: Enhance the skill level of the regional work force.

Actions:

1. Coordinate with the public and private sectors to assess skills for targeted industries.

2. Participate with educators, business groups, and public entities such as the Workforce Development Boards to establish training and educational programs.

As specified earlier in this document, the applicant will cooperate with FGCU regarding the development of the FGCU Research and Development Park. This area will provide a variety of opportunities for public-private partnerships intended to involve students in the surrounding business community. In addition, the location of FGCU adjacent to a major employment center will enable the University to provide continuing education classes to the existing employment base and improving the regional work force.

Natural Resources Element

Goal 3: Water Management Districts and local governments must have programs based on scientific modeling to protect surface water, potable water wells, wellfields and contributing areas from contamination.

Strategy: To resolve this land planning and water management disjunct, all entities need a common, readily accessible, understandable water resource modeling tool.

Actions:
1. Working with the Water Management Districts and local governments, assist in the creation of a modeling tool to evaluate current resource conditions based on alternative rainfall scenarios. The modeling tool needs to be able to predict and evaluate future resource conditions based on alternative land use and rainfall scenarios. The tool needs to be able to address the likelihood of success of different management responses to the alternatives forecasted.

Goal 4: Livable communities designed to improve quality of life and provide for the sustainability of our natural resources.

Strategy: Promote through the Council's review roles community design and development principles that protect the Region's natural resources and provide for an improved quality of life.

4. Working in cooperation with agencies and local governments insure that all mining and borrow operations prepare and implement reclamation programs that restore and ensure long-term sustainability of their watersheds and native habitats.

A Conceptual Water Management Master Plan for the airport was developed pursuant to Lee Plan POLICY 18.1.9. This plan was developed between Lee County, the property owners and the SFWMD. The project is consistent with that plan. The site was first developed as a mining operation in the 1970's, well before any restoration standards were developed. As a result the site was abandoned when the mining ceased, leaving the site covered with a by product on the rock crushing (fines), leftover piles of material and almost completely devoid of vegetation. By allowing the redevelopment of an obviously disturbed site, there is the opportunity to provide restoration and reclamation, including lake bank regrading and re-vegetation, effectively minimizing the effects of mining on ground and surface waters.

Transportation Element

Goal 1: Construct an interconnected multimodal transportation system that supports community goals, increases mobility and enhances Southwest Florida's economic competitiveness.

Strategy: Promote Smart growth where residential communities are linked with job centers through transit, carpooling, or other high occupancy vehicle transportation.

Goal 2: Livable communities designed to affect behavior, improve quality of life and responsive to community needs.

Strategy: Promote through the Council's review function a good environment for driving, walking, bicycling, and public transit using a highly connected network of public streets, green space, and community centers.

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The project proposes to provide a multimodal transportation system, linking FGCU and the subject property with an integrated public transit system. In addition to a vehicular connection, a pedestrian and bicycle path system will be provided and connected to the campus system of boardwalks. Bus service can be provided with the addition of a Lee Tran stop intended for the site, connecting to the existing Lee Tran Route serving the University and through the use of the FGCU Eagle express shuttle bus service. The Tradeport areas to the north and the shopping areas to the west can also be connected to the transportation system via Master Planning accomplished at the DRI/Planned Development rezoning process.

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Urban Sprawl Analysis

The project as submitted for review does not constitute Urban Sprawl based on commonly recognized indicators such as those found in Florida Administrative Code 9-J(5). Lee Plan Policy 2.4.3(4) specifically requires an analysis of FAC 9J–5.006 (g), (h), 9i), and (j). Those indicators are discussed below.

(g) Primary indicators. The primary indicators that a plan or plan amendment does not discourage the proliferation of urban sprawl are listed below. The evaluation of the presence of these indicators shall consist of an analysis of the plan or plan amendment within the context of features and characteristics unique to each locality in order to determine whether the plan or plan amendment:

1. Promotes, allows or designates for development substantial areas of the jurisdiction to develop as low-intensity, low-density, or single-use development or uses in excess of demonstrated need.

The plan does not promote single use, low intensity development, as demonstrated in the proposed mix of uses.

2. Promotes, allows or designates significant amounts of urban development to occur in rural areas at substantial distances from existing urban areas while leaping over undeveloped lands which are available and suitable for development.

The plan does not allow for urban development in a rural area, as it is located adjacent to existing urban areas, providing for compact development patterns.

3. Promotes, allows or designates urban development in radial, strip, isolated or ribbon patterns generally emanating from existing urban developments.

The concept plan submitted with the application demonstrates the development will not be designed in radial or strip patterns.

4. As a result of premature or poorly planned conversion of rural land to other uses, fails adequately to protect and conserve natural resources, such as wetlands, floodplains, native vegetation, environmentally sensitive areas, natural groundwater aquifer recharge areas, lakes, rivers, shorelines, beaches, bays, estuarine systems, and other significant natural systems.

The site was previously disturbed through the permitted mining activities taking place on the site since the early 1970's. The site will be redeveloped and enhanced through the removal of the mining by products and the incorporation of a stormwater management

system with the new development. All significant natural resources are being preserved and/or enhanced.

5. Fails adequately to protect adjacent agricultural areas and activities, including silviculture, and including active agricultural and silvicultural activities as well as passive agricultural activities and dormant, unique and prime farmlands and soils.

The site does not contain, nor is it suitable for agricultural development.

6. Fails to maximize use of existing public facilities and services.

The applicant has supplied letters from the necessary public service providers indicating those agencies have the ability to provide the necessary services.

7. Fails to maximize use of future public facilities and services.

The subject property is in a unique location, south of the Airport, north of the University and west of the future County Road 951, in an area where public facilities and services already exist. The subject property will utilize the Lee County Utilities water distribution system, planned for upgrades to the existing water main located at the project's northern boundary within the Alico Road right of way.

8. Allows for land use patterns or timing which disproportionately increase the cost in time, money and energy, of providing and maintaining facilities and services, including roads, potable water, sanitary sewer, stormwater management, law enforcement, education, health care, fire and emergency response, and general government.

The project will not allow for land use patterns which disproportionally increase the cost in time, money and energy of providing and maintaining services as demonstrated by the attached letters of availability.

9. Fails to provide a clear separation between rural and urban uses.

The future land use change does provide for a clear separation between rural and urban uses, as demonstrated on the attached aerial photograph. All those lands west of the alignment of the future CR 951 and south of the subject property contain urban uses. All those lands north of the subject property are designated for Tradeport usage.

10. Discourages or inhibits infill development or the redevelopment of existing neighborhoods and communities.

The future land use change will result in infill development, providing for redevelopment of a heavily impacted site..

11. Fails to encourage an attractive and functional mix of uses.

The project will encourage an attractive, functional mix of uses, related to and in support of the adjacent Florida Gulf Coast University. The plan features a diversity of housing types, FGCU housing, a town center, a conference center, general office and university related research and development.

12. Results in poor accessibility among linked or related land uses.

The project will not result in poor accessibility among linked or related land uses. The project will provide a multimodal connection to the adjacent campus, providing for connectivity between the two sites.

13. Results in the loss of significant amounts of functional open space.

The plan does not result in the loss of functional open space. The site has been heavily impacted with the former mining operation and a significant portion of the site is covered with a "fine by-product" much of which will be removed from the site. The development will incorporate functional open space through the planned development process, including recreational use of the large existing lake. The creation of a rookery island is being considered within the existing lake, resulting in additional open space.

(h) Evaluation of land uses. The comprehensive plan must be reviewed in its entirety to make the determinations in (5)(g) above. Plan amendments must be reviewed individually and for their impact on the remainder of the plan. However, in either case, a land use analysis will be the focus of the review and constitute the primary factor for making the determinations. Land use types cumulatively (within the entire jurisdiction and areas less than the entire jurisdiction, and in proximate areas outside the jurisdiction) will be evaluated based on density, intensity, distribution and functional relationship, including an analysis of the distribution of urban and rural land uses. Each land use type will be evaluated based on:

1. Extent.
2. Location.
3. Distribution.
4. Density.
5. Intensity.
6. Compatibility.
7. Suitability.
8. Functional relationship.

9. Land use combinations.
10. Demonstrated need over the planning period.

(i) Local conditions. Each of the land use factors in (5)(h) above will be evaluated within the context of features and characteristics unique to each locality. These include:
1. Size of developable area.
2. Projected growth rate (including population, commerce, industry, and agriculture).
3. Projected growth amounts (acres per land use category).
4. Facility availability (existing and committed).
5. Existing pattern of development (built and vested), including an analysis of the extent to which the existing pattern of development reflects urban sprawl.
6. Projected growth trends over the planning period, including the change in the overall density or intensity of urban development throughout the jurisdiction.
7. Costs of facilities and services, such as per capita cost over the planning period in terms of resources and energy.
8. Extra-jurisdictional and regional growth characteristics.
9. Transportation networks and use characteristics (existing and committed).
10. Geography, topography and various natural features of the jurisdiction.

The application proposes a multi- use development containing FGCU housing (students and faculty), FGCU support and classrooms, an FGCU Research Park, a multi-use town center with multiple land uses, office uses, a hotel and conference center and residential and recreational uses, at an intensity of 10,000sf/non-residentioal acre. A maximum of 1,950 residential units is being proposed as part of the project, in keeping with the University Community land use designation maximum density limitations of 2.5 units per acre (gross density) over the entire land use designation. These 1,950 units are included within the 6,500 units currently allocated to the University Community land use designation, of which 3,300 units are currently unallocated. Therefore, this plan amendment does not require allocation of any new or additional density. The designation also allows for clustering of units, with individual parcel (net) densities of 15 units per acre within the University Community designation. The subject property contains approximately 350 upland acres, leaving the remainder of the property as lake or wetland area, increasing intensity on the uplands. Of the 350 acres, approximately 160 acres are devoted to residential uses at a density of approximately 10 units per net acre, but in no event will the density be less than 5 units per acre. Majority of the residential areas will be higher density multi-family style development, while other residential areas maybe lower density development. The project is slated for a diverse mixture of uses, functionally related and interconnected for mobility purposes.

The subject property is located such that it is surrounded on three sides by urban designations and will be separated from the remaining DRGR properties to the east by future CR 951. In addition the site has approximately 7,265' of frontage on Alico Road,

more than 9,600' of frontage on the future CR 951 extension and contains a large freshwater lake as the result of past mining activities. The site was previously occupied by Florida Rock Industries who until recently, mined and operated a concrete batch plant on the site since the 1970's. Immediately adjacent to the northerly boundary of the site is Alico Road. North of Alico Road and south of the Southwest Florida International Airport is vacant property in the Tradeport Future land use category. Included within this Tradeport area is the proposed Florida Gulf Coast Technology and Research Park, a Development of Regional Impact. The 489+/- acre site will be developed with a mixture of office, industrial, hotel, airport-related and support commercial uses.

The western boundary of the subject property is adjacent to the Miromar Lakes MPD, then Ben Hill Griffin Parkway and the Gulf Coast Town Center. The land use designations for this area are University Community and University Interchange. The University Interchange designation is located on 80+/- acres in the southwest quadrant of the I-75 – Alico Road Interchange, with University Community occupying the remainder of the property. The portion of Miromar Lakes adjacent to the western boundary is vacant and planned for a commercial shopping center on the approved Master Concept Plan. The very southerly end of the western property line also abuts a portion of the Miromar Lakes residential development, containing primarily large lot, low density single family residential housing types. Directly across Ben Hill Griffin is the Gulf Coast Town Center Shopping Center Development of Regional Impact. In addition to the regional commercial use, the site contains 408 multiple family units in the College Club apartments.

The southerly property line also abuts the Miromar Lakes MPD, occupying the entire southerly property line. The existing residential development has received Development Orders for approximately 1,200 units consisting of both single family and multiple family structures. Immediately south of Miromar Lakes and within close proximity to the southerly tip of the subject property is Florida Gulf Coast University. The subject property's eastern property line abuts an existing Florida Power and Light easement and the future extension of County Road 951. Immediately east of the power line is the DRGR land use designation and the Lago Development. Lago Development has received Development Orders for a proposed 336 lot single family subdivision and 18 hole stand alone golf course and is also located on a former mining operations site.

Therefore based on the surrounding existing and proposed uses, the development does not constitute leap frog development and in fact no other undeveloped urban parcels are available and suitable for development in close proximity.

(j) Development controls. Development controls in the comprehensive plan may affect the determinations in (5)(g) above. The following development controls, to the extent they are

included in the comprehensive plan, will be evaluated to determine how they discourage urban sprawl:

1. Open space requirements.
2. Development clustering requirements.
3. Other planning strategies, including the establishment of minimum development density and intensity, affecting the pattern and character of development.
4. Phasing of urban land use types, densities, intensities, extent, locations, and distribution over time, as measured through the permitted changes in land use within each urban land use category in the plan, and the timing and location of those changes.
5. Land use locational criteria related to the existing development pattern, natural resources and facilities and services.
6. Infrastructure extension controls, and infrastructure maximization requirements and incentives.
7. Allocation of the costs of future development based on the benefits received.
8. The extent to which new development pays for itself.
9. Transfer of development rights.
10. Purchase of development rights.
11. Planned unit development requirements.
12. Traditional neighborhood developments.
13. Land use functional relationship linkages and mixed land uses.
14. Jobs-to-housing balance requirements.
15. Policies specifying the circumstances under which future amendments could designate new lands for the urbanizing area.
16. Provision for new towns, rural villages or rural activity centers.
17. Effective functional buffering requirements.
18. Restriction on expansion of urban areas.
19. Planning strategies and incentives which promote the continuation of productive agricultural areas and the protection of environmentally sensitive lands.
20. Urban service areas.
21. Urban growth boundaries.
22. Access management controls.

The Conceptual Plan submitted with this application depicts a compact, walkable community and does not represent strip development or a premature conversion of rural lands to urban lands. The land has been utilized for mining purposes for more than 30 years, with that use no longer viable on the site. The subject property is thus appropriate for conversion to a land use more compatible with the surrounding area. All those lands worthy of preservation or conservation are being protected and there are no existing AG uses to be preserved.

The site will also make use of the surrounding utility systems, taking advantage of the upgraded water and sewer lines needed to accommodate the Tradeport areas across Alico Road from the subject property. In addition, the provision of the necessary services of water, sewer, fire, law enforcement and solid waste can be accommodated as evidenced by the attached letters of availability.

A review of the Lee County future land use map shows the property as a westerly extension of the DRGR land use designation into the University Community and Tradeport land use designations. This property was designated in this fashion to recognize the existing mining operation (at that time), one of the only allowable land uses within the DRGR. As demonstrated by the attached geotechnical documents, there are no commercially viable mining materials remaining on the site and therefore the use was abandoned, leaving the site with an abandoned mining operation and no use of the site. The re-designation of this site as University Community represents infill development and a redevelopment of an existing disturbed site. In addition, the location of future CR 951 on eastern property line provides for clear, physical separation between urban and non-urban uses.

The requirement mandating Development of Regional Impact review and planned development rezoning will ensure the necessary open space, landscaping, clustering, and access management controls to ensure compliance with the Development Controls from Section (j).

Therefore based on analysis of the indicators discussed above, and the preceding Lee Plan Consistency document attached to this application, the project does not constitute urban sprawl.

Alico Land Development, Inc.

Evaluation of Section 12, Lake 5 Sediment

June 2009

Report

Alico Land Development, Inc.

Evaluation of Section 12, Lake 5 Sediment

June 2009

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Executive Summary

Background

The Alico Land Development, Inc. property includes a large portion of the site filled with mining residue (fine sand, silt, and clay) from previous mining operations. Options for redevelopment are being explored and include reclaiming lake area and buildable property by removing the residue from select locations and re-depositing the material into an adjacent lake.

Previous Study

Camp Dresser & McKee Inc. (CDM) completed a geotechnical investigation in 2002 to evaluate the suitability of the residue filled areas for redevelopment. The study included 16 test borings and physical testing of residue samples. The fill thickness from mining residue ranged from 8.5 to 68.5 feet thick. Recommendations were provided regarding the potential settlement and ground improvement for the proposed structures and areas of the site being considered for redevelopment.

Current Scope and Study

The current scope of work is described in our proposal dated February 19, 2009. The work was designed to evaluate residue in Section 12 of the Alico Land Development, Inc. property. This feasibility study evaluated the removal of residue to expand the footprint of Lake 5 and allow a more desirable site plan for future development, such as providing more buildable lakefront property.

The major findings of the study are:

- The majority of residue is fine sand that could be used as structural fill.
- The residue includes fines (silt and clay) in lenses throughout the filled area that can have a deleterious effect on fill properties.
- A method to separate the fines from the sand can be used during the removal (dredging and classifier).

Methodology and Results

CDM advanced 11 hand auger borings to obtain residue samples. The soil types are generally consistent with those in the 2002 study, which are predominantly fine sands with varying amounts of silt and clay. Much of the fine sand material could be used for structural fill during redevelopment as it drains readily. The silt and clay material is less desirable for structural fill because it does not drain as quickly as the sands.

Bench scale sedimentation tests were conducted using the fine grained silts and clays to determine how quickly settlement would occur and turbidity levels would drop. Our testing indicated that within three days, the residue settled and the turbidity of

the water dropped from greater than 1,000 NTUs to approximately 15 NTUs, indicating that the material settles and the water clears within three days.

CDM conducted a bathymetric survey of Lake 5 to estimate the potential volume of residue that could be redeposited. The average depth of the lake was approximately 20 feet on May 7, 2009, when the lake was relatively low due to dry season water levels.

A cut and fill analysis was conducted to estimate the volume of residue removal versus re-deposition in the Lake 5. Based on the conceptual plan, if all residue removed was deposited in the lake, the lake bottom would rise approximately 10 feet.

Two potential methods were evaluated to remove the residue; by hydraulic excavator or by dredging. An advantage of dredging is the residue could be separated (sand from silt/clay) by a particle size classifier. The separation would allow minimization of material returned to the lake for redeposition while the sand could be stockpiled, allowed to drain, and used for structural fill. If the excavator is used, usable fill may be limited to material above the water table and particle size separation would be more problematic. However, an excavator will be able to provide final grading of the lake side slopes. A combination of the two methods will allow the advantages of each method.

Permitting requirements were researched for the proposed construction. The project will require an Environmental Resources Permit (ERP) from the South Florida Water Management District (SFWMD). A jurisdictional determination for the US Army Corps of Engineers will be needed to determine if the lake is considered "waters of the United States."

Section 1
Introduction

1.1 Background

Alico Land Development, Inc. is considering development of the 972-acre Alico Corporation parcel, located in Sections 11, 12 and 13, Township 46S, Range 25E, Lee County, Florida, for residential and commercial use. The parcel was mined for over 30 years, approximately from 1972 to 2005, during which time the site was excavated and subsequently partially filled with sediments from the mining operations. Currently the majority of Section 12 and the portion of the parcel in Section 13 are above the water table. A large lake (Lake 5) covers the east half of Section 11 and the southern edge of Section 12.

CDM previously conducted a geotechnical study encompassing a broad portion of Section 12 in the area northeast of Lake 5. The investigation indicated the presence of very soft to very loose fill materials (mining residue) to depths of 8.5 to 68.5 feet. Because the fill materials would require significant improvement in order to support construction associated with site development, the current conceptual site plan limits construction to the unmined areas and proposes creation of an island preserve on the mining residue in the southwest and central portions of Section 12.

To create the island preserve, an 8 to 10-foot deep channel would be excavated in the mining residue separating the preserve from the developable areas. Also the small lake in the north half of Section 12 may be expanded to five or six times its current area. The proposed earthwork will increase the number of lakefront building lots enhancing the value of the development.

A 2008 aerial photograph of the project site is shown on **Figure 1-1**.

1.2 Purpose and Scope

Current plans contemplate deposition of the excavated materials into Lake 5 or possibly other nearby lakes. CDM was contracted by Alico Land Development, Inc. to conduct a planning level study of the proposed excavation and re-deposition of the mining residue in order to advance the conceptual project plans. The scope of work consists of the following tasks:

Task 1 Site Visits

The Consultant shall make up to two site visits for the purposes of reconnaissance and familiarization with the site and sediment sample collection. CDM will meet with the client and team to discuss and confirm the plans and objectives of the project.

Task 2 Data Evaluation

CDM will collect and evaluate available existing data. The existing data will include site topography, lake surface area and depth, subsurface conditions and soils lab testing. CDM will coordinate with Alico Land Development, Inc. to obtain available

data. The geotechnical evaluation under this task will primarily be a review of the geotechnical data presented in the CDM report of May 14, 2002. Recommendations will be made as to additional geotechnical information required for this study. Other available data to be reviewed under this task include:

- Recent aerial photographs
- Available topographic or bathometric surveys
- Other available data on the existing site conditions

Task 3 Cut and Fill Area Identification and Evaluation

CDM will identify and evaluate the areas that may be suitable for the removal of fines and placement of fill to provide buildable land. CDM will review any re-development plans and discuss with the client the areas where buildable land is desired for the redevelopment.

Task 4 Particle Settling Evaluation

CDM will conduct an initial evaluation of time of turbidity due to fines settling. Bench scale settleability tests will be performed to determine how quickly suspended sediments will settle out of the lake water and turbidity will be noted during settling. Water and mine wash sediments will be collected during the initial site visits, and testing will be performed on the samples to ascertain rates of settling and turbidity removal. The analysis will also consider the existing particle size data from our previous report.

Task 5 Particle Re-Suspension Evaluation

CDM will conduct an initial evaluation of fines being re-suspended and if it is considered a problem, list some alternatives to be evaluated in the future to solve this problem, i.e., underwater capping, augment with polymer, etc.

Task 6 Conceptual Analysis of Sediment for Removal and Redeposition

CDM will estimate the volume of sediment for removal and re-deposition based on existing information. The analysis will also include an estimate of available volumes in lake(s) where the material can be re-deposited. Construction techniques for removing and re-depositing fines will be evaluated.

Task 7 Permitting Requirements

CDM will research the permitting requirements for construction. This task will consist of a brief investigation for the permits needed for the proposed dredging, transport, and deposition operations to gain a sense of the time and effort needed to comply with all regulatory requirements. Activities that could potentially require a permit include:

- Dredging from Section 12 lake.
- Slurry pipeline(s) to receptor lake(s).

- Deposition. If there are significant differences in depth or sensitive receptors among the potential receptor lakes, individual permits may be required for each.

Task 8 Summary Report

CDM will prepare a letter report summarizing our findings, results, and recommendations for future work. The report will be submitted to Alico Land Development, Inc. as a draft for review comments. Upon receipt of comments from Alico Land Development, Inc., CDM will submit ten (10) final copies of the report.

This summary report includes the following primary sections:

- Section 2 - Site and Subsurface Conditions (covering work tasks 1 and 2)
- Section 3 - Particle Sedimentation Evaluation (covering tasks 4 and 5)
- Section 4 - Excavation and Filling (covering tasks 3 and 6)
- Section 5 - Permitting Considerations (covering task 7)
- Section 6 - Conclusions and Recommendations

1.3 Report Limitations

These recommendations have been prepared for a planning level study to advance the conceptual planning for the proposed development of the Alico Parcel in Lee County, Florida as understood at this time and described in this report. This report has been prepared in accordance with generally accepted engineering practices. No other warranty, express or implied, is made. In the event that changes in the design occur, the conclusions and recommendations contained herein should not be considered valid unless verified in writing by CDM.

Section 2
Site and Subsurface Conditions

2.1 Site History

CDM has reviewed historical aerial photographs from Lee County dating back to 1966, specifically photographs dated 1966, 1968, 1970, 1972, 1974, 1975, 1977, 1980, 1981, 1984, 1990, 1993, 1996, 1999, 2002, 2005, and 2008. The site was essentially undeveloped, except some agricultural use in the northeast quadrant of Section 12, until 1972 when mining operations were initiated in Section 12. The mined products included sand and FDOT grade limerock. By 1974 a lake had been excavated in Section 12. Subsequent photographs indicate the expansion of mining activity. The processing plant was installed along the east side of Section 12. Waters from the processing work flowed west into the lakes creating deltas as the mining residues settled. The mining activity was still evident on the 2005 aerial photograph, but appears to have been terminated by the time of the 2008 aerial. The processing equipment and installations were removed after the 2008 aerial photograph was taken.

CDM was provided with an aerial photograph prepared by WilsonMiller on which the property limits, the Density Reduction/Groundwater Resource (DRGR) boundary, and the unmined areas were delineated (**Figure 2-1**).

The 972-acre Alico parcel includes approximately 275 acres in Sections 11 and 12 and an additional 67 acres in the northeast corner of Section 19 that were not mined. Our research generally substantiated the information in Figure 2-1. However, the 1974 aerial shows several channels and small basins crossing the "unmined" areas. The 1974 aerial photograph is shown in **Figure 2-2.**

2.2 Available Information

2.2.1 USGS Quadrangle Map

CDM reviewed the United States Geological Survey (USGS) quadrangle map entitled Estero that was developed in 1958 and photorevised in 1987. Mining activity covered all of Section 12, the east half of Section 11, the north half of Section 13 and the eastern three quarters of the north half of Section 14, Township 46S, Range 25E. The Alico parcel is shown as an "intricate surface area" with two major tailings ponds. The lake in Section 11 was not connected to the lake covering much of the south half of Section 12. A third tailings pond was located in Section 13.

The ground is relatively flat with an elevation of about 20 feet NGVD 1929. The surrounding areas had not been developed as of 1987. Much of the land is depicted as swamps, many of which were still wooded.

2.2.2 Soil Survey Map

CDM reviewed the National Resources Conservation Service Soil Survey of Lee County published in 1984, based on field mapping from 1981. Section 12, except the

northwest corner, and the north half of Section 13 are mapped as Matlacha gravelly fine sand (69), a nearly level, somewhat poorly drained soil formed by filling and earthmoving operations. The typical soil profile for Matlacha gravelly fine sand consists of three feet of gravelly fine sand and sandy mineral material overlying undisturbed fine sands to depths of almost seven feet. The northwest corner of Section 12 and the east half of Section 11 had not been mined yet.

2.3 Existing Site Conditions

The site is currently unoccupied. The east half of Section 12 is essentially barren with occasional pieces of abandoned equipment. The topography is uneven with scattered stockpiles and large low areas surrounded by steep walls where excavation stopped.

The west side of Section 12 is covered with tall grasses and a few small trees. A berm crowned with a row of palm trees runs roughly north-south through the middle of the vegetated area. The berm is split into two segments: a north and a south segment.

Lake 5 covers most of the east half of Section 11. The lake extends into Section 12 around the south side of the residue deposits. The north end of the lake connects to a channel that parallels Alico Road in the west half of Section 12. The channel ends in a small tailings pond in the center of the north side of Section 12.

An upscale residential development, Miromar Lakes, is located on the south side of the site. The western portion has been constructed and the east side is in development. The south end of Lake 5 has a protective layer of large riprap (approximately 2- to 3-foot rocks).

Alico Road runs along the north side of the site. The lands to the west of the site between Lake 5 and Ben Hill Griffin Parkway are not developed. A large tailings pond is located on the east side of the site.

2.4 Subsurface Soil Exploration Programs

2.4.1 Previous Exploration Program

CDM performed a geotechnical exploration in 2002 for The Ginn Company in order to assess reuse options of the sediment filled areas of Section 12. Sixteen (16) test borings were performed throughout the site, and selected soil samples were tested to determine the engineering properties of the soils. The results of the explorations and CDM's preliminary geotechnical engineering recommendations for suitable land reuse were presented in the engineering report *Geotechnical Assessment of Site Reuse Options* dated May 14, 2002. Several highlights of the report are summarized below:

- The test borings generally encountered fill (residue from the quarrying operation) underlain by naturally deposited sand, silt, gravel or limestone bedrock. The mining residue was variable and consisted of layers of loose to very dense fine sand, very soft to medium stiff silt, and very soft to medium

stiff clay. The total fill thickness ranged from 8.5 to 68.5 feet at the test boring locations.

- Fine sand appeared to be the most predominant type of residue at the site. The borings in the northern portion of the site encountered primarily fine sand residue with no or few layers of clay or silt. The mining residue with significant layers of silt and clay appeared to be located principally in the southern half of the site.

- While various ground improvement methods were discussed, soil preloading and deep dynamic compaction (DDC) were considered to be the least expensive effective techniques.

- The silt and clay mining residues were uniform. Atterberg limits were determined for 12 samples of the silt and clay residue. Three were not plastic. Of the other nine tests, eight samples had liquid limits between 28 and 34 percent and plastic indices between 5 and 11 percent. The remaining sample had a liquid limit of 42 percent and a plastic index of 20 percent. The Unified Soil Classification System (USCS) symbols for these soils are ML and CL. Four hydrometer analyses for these same soils indicated the clay fraction (finer than 0.001mm) was generally 19 to 25 percent by weight. The more plastic sample had 40 percent clay.

The locations of the previous borings and the thickness of mining residue at each location are shown on **Figure 2-3.**

2.4.2 Recent Subsurface Soil Explorations

Eleven (11) hand auger test borings were performed by CDM personnel on April 23 and May 7, 2009, in order to obtain samples of the mining residues. The borings generally were located in low areas within the footprint of the proposed channel. The borings were advanced to depths ranging from 3 to 9 feet. The depth of the borings was limited by caving of the boreholes due to the high water table. A CDM geotechnical engineer visually classified the soil samples in accordance with the Burmeister Soil Identification System. Boring logs are included in **Appendix A**.

The test borings were located in the field based on features identified in the 2008 aerial photograph. GPS coordinates were recorded at each boring location. The locations of the borings are shown on **Figure 2-4.**

The soil samples collected during the exploration will be stored at the CDM Fort Myers office for 90 days after the submittal of this report.

2.5 Subsurface Soil Conditions

2.5.1 Summary of Subsurface Conditions

The recent test borings were all performed in areas that had been filled with mining residue. The soils generally consisted of a layer of silt and clay underlain by fine sands

to the bottom of the boreholes. However, at test boring AB-9, on the east side of Lake 5, the silt and clay layer extended the full 8-foot depth of the test boring. No silt and clay was encountered in three test borings: AB-8 near Alico Road on the north side of the site; AB-5 in the center of the site; and AB-1, slightly south of center. None of the 11 test borings extended into natural soils.

The thickness and consistency of the silt and clay layer varied across the site. In the central area just south of the 20-acre strip of unmined land, test borings AB-6 and AB-7 encountered a ½ inch thick surficial layer of medium stiff silt and clay. The thickness of the silt and clay layer increased towards the south to approximately 1 foot in test borings AB-2 and AB-4, and 2 to 3 feet in test borings AB-3, AB-10 and AB-11. The silt and clay soils were softer in the more southern locations.

These data correspond with the findings in the 2002 CDM test borings. The silt and clay layer was encountered within 15 feet below the ground surface in six locations; test borings B-1, B-7, B-10, B-11, B-12 and B-14. The ground surface at these test boring locations at the time of drilling varied from EL 22 to 25 feet NGVD 1929, except boring B-10 which was at EL 29 feet. Test boring B-1 is located in the northeast corner of the site, and the silt and clay layer occurred between depths of 8.5 and 9.5 feet. Test boring B-12 is located in the northeast corner of the proposed channel around the island preserve, and the silt and clay soils were between depths of 8.5 and 13 feet. The other test borings are located along the south berm or slightly east of it, and the silt and clay layer at these locations typically extended from the ground surface to depths of 8 to 18 feet.

The data regarding the locations and thicknesses of the surficial silt and clay layer are summarized in **Figure 2-5**. Because these data are very limited and no topographic information is available for the locations of the recent hand auger borings, conclusions regarding the subsurface conditions between borings are preliminary.

2.5.2 Groundwater

Groundwater was encountered at depths of approximately 0.5 to 6 feet below the existing ground surface at the time the borings were performed. The variation was due primarily to the topography of the site. The water table was near the seasonal low when the borings were performed (end of dry season).

2.6 Lake 5 Soundings

No data were available regarding lake depths. CDM personnel measured the lake depth at 59 locations with a Garmin depth sounder on May 7, 2009. The calibration of the depth sounder was verified with measurements using a weighted tape measure. GPS readings were taken at each location. No information is available about the water surface elevation of Lake 5 on the date that the soundings were taken.

The results of the soundings are shown on **Figure 2-6**. Lake 5 was generally about 20 feet deep on May 7, 2009. The greatest measured depth was 28 feet. The lake depth on the south side of the proposed future island preserve ranged from 5 to 9 feet. A shelf

extended approximately 500 feet west into the lake from the residue deposits (the future island preserve). The water depths above the shelf ranged from several feet near the shore to about 14 feet on the edge.

The lake level at the time of the depth soundings is estimated to have been near the seasonal low as the soundings were conducted near the end of the dry season.

2.7 Expected Variations in Subsurface Conditions

Interpretation of general soil conditions presented herein is based on soil and groundwater conditions observed at the test boring locations. However, subsurface conditions may vary between exploration locations. The number of borings is very limited for the large area under study. If conditions are found to be different from assumed, recommendations contained in this report should be reevaluated by CDM and confirmed in writing.

Water levels measured in the explorations should not necessarily be considered to represent stabilized groundwater or lake levels. The water levels are expected to fluctuate with season, temperature, climate, construction in the area, and other factors. Actual conditions during construction may be different from those observed at the time of the explorations.

Section 3
Particle Sedimentation Evaluation

3.1 Laboratory Sedimentation Tests

Five samples of the silt and clay mining residues were selected for preliminary sedimentation tests. These tests were not performed in accordance with industry guidelines; rather their purpose was to estimate the rate of settlement of the residue in order to assess potential issues with turbidity.

Approximately 30 to 35 cubic centimeters (cc) of each sample were mixed with water from Lake 5 in 1-liter graduated cylinders. After dispersing the lumps and filling the cylinders to the 1,000 ml level with lake water, the samples were allowed to sit for four days before starting the tests. The water-residue mixtures were stirred repeatedly during the wait time. The samples were then remixed thoroughly (by inverting the cylinders repeatedly) before allowing the residues to settle unimpeded. Periodic turbidity readings were taken of water samples extracted between the 400 and 500 ml lines on the graduated cylinders. A LaMotte 2020 meter was used to measure turbidity.

Table 3-1 includes the samples that were tested and shows the turbidity readings in Nephelometric Turbidity Units (NTUs) versus time. Within three days the average turbidity dropped from initial readings in excess of 1,000 NTU to about 15 NTU. The initial turbidity of the lake water was 5.5 NTU. The tests indicate that the silt and clay residues settle rapidly in a calm environment. However, possible currents from storm water outfalls, wind-generated waves, etc. must be evaluated as they could delay the sedimentation process.

3.2 Re-Suspension of Sediments

Re-suspension of the sediments occurs when water velocities associated with wave action and currents exceed a critical value that is dependent on various factors including size and weight of the particles and slope of the shoreline. Based on the preliminary settling tests, it appears that re-suspension of the sediments along a shoreline will not result in a long-term problem as the particles will settle rapidly once the waves have subsided. Near-shore sediments will also tend to migrate into deeper water during the suspension/settlement cycle, resulting in a decreasing re-suspension of particles over time. Placement of a layer of medium to coarse sand or gravel-sized aggregate in the anticipated zone of wave action should minimize the issue of re-suspension during normal storm events.

Near storm water outfalls or other steady generators of currents and eddies in the water, it may be necessary to provide a protective layer above the very fine mining residues. Layers of coarser particles, i.e., sands and gravel-size particles, can be designed and installed to provide the required stability.

Section 4
Excavation and Filling

4.1 Conceptual Site Plan

CDM was provided with the preliminary site plan shown in **Figure 4-1**. The site plan, prepared by WilsonMiller for the proposed development of the 972-acre parcel, anticipates intensive use of the unmined land for a variety of residential construction, offices and commercial uses. In several areas expansion of the development into mined land is contemplated. However, exploration of the subsurface conditions in the proposed zones of expansion was outside the scope of the current study.

4.2 Quantities of Mining Residue to be Removed

Using the conceptual site plan, CDM has estimated the amounts of mining residue that will be excavated in the development of the site. The estimates presented in **Table 4-1** are very preliminary because the site plan is only conceptual and CDM had no current topographic data. Estimates of the quantities to be excavated are based on the following assumptions:

- The channel around the island preserve will be 10 feet deep during periods of average wet season lake levels;
- The lake level is currently 2 feet below the average wet season level;
- The average elevation of the land around Lake 5 where the channel will be excavated is about 3 feet above the current lake level;
- The shallow areas of Lake 5 adjacent to the island preserve will require 4 feet of excavation; and
- About 14 feet of soil must be removed to expand the north lake, 4 feet above the water table and 10 feet below.

4.3 Disposal/Reuse of Excavated Mining Residue

4.3.1 Overview

Based on the soundings, the lake bottom area that is available for deposition of the excavated mining residue, i.e., the area that is approximately 20 feet deep, is about 860,000 square yards or 175 acres. If all of the excavated soil (Table 4-1) was deposited in Lake 5, the lake bottom would rise almost 9.5 feet, probably not an acceptable increase. Furthermore, a swell factor of 5 to 10 percent should be included. Therefore, CDM recommends that reuse of the excavated mining residue be considered.

An additional consideration is the possible use of the excavated soils to preload proposed construction areas that are underlain by soft or loose soils. This concept was discussed in the 2002 CDM geotechnical report. Additional studies are necessary

when the site plans are developed to provide detailed recommendations for the location, height, and time frame for the preloads.

4.3.2 Use of Residues Excavated from Above the Water Table

The mining residues that are above the water table (before removal) can be used as fill for the site development. Depending on the moisture content and the proposed use, some drying may be necessary. The amount of fines (silt and clay) in the residue will generally determine its ultimate use. Soils with fines contents below 12 percent should provide acceptable structural fill. Soils with fines contents above 12 percent typically are not used for structural fill in south Florida. These soils drain slowly and require more drying time, although they can be used for common fill where minimal compaction is required.

Another option would be to scrape the dry soils from the future island preserve for use as fill on the developable areas. Wet silt and clay residue could then be placed on the future island preserve to create topographic relief.

4.3.3 Use of Residues Excavated from Below the Water Table

The majority of the excavated soils will be mining residues that are currently below the water table. Possibilities for reuse of the materials will depend on the nature and uniformity of the residue as discussed in this section. The method of excavation also has a significant effect on the possible soil usage.

The borings encountered mining residues that varied from poorly graded fine to very fine sand with trace to some silt, to non-plastic silts, to silt and clay. Results of the limited number of borings available to date indicate that much of the upper 10 to 15 feet of the mining residues are the fine sands, and that the silts, and silt and clay residues tend to be concentrated in the west section of the proposed channel (on the north side of the island preserve). This observation should be considered very preliminary as it is based on a limited number of borings and negligible topographic information.

If the various classes of mining residues actually occur in concentrated areas as postulated above, then excavation procedures that allow separation of soils could be employed. The sands should be stockpiled and allowed to drain before being used as fill. Additional drying may be required after the sands are spread. Their final use as either structural fill or common fill would depend on the percentage of fines and project needs.

While the clays and silts are technically usable as fill, the wet materials from below the water table will require significant effort to dry them to workable moisture contents. The silts and clays can be spread in thin lifts and disked frequently until the moisture content approaches the Proctor optimum. However, as mentioned

previously, this type of soil is not generally used for structural fill in south Florida. Depending on the consistency of the soil after excavation, the silt and clay residues could be used for common fill.

4.4 Techniques for Excavation of Mining Residues

4.4.1 General

To the extent possible, the residue materials that are above the water table should be scraped and stockpiled for use as fill on the developable land. The construction procedures should minimize the potential for increasing the moisture content of the "dry" excavated soils by providing positive drainage of the stockpiled soils and possibly covering them. Adequate bearing capacity for the construction equipment could be an important issue as soft and loose soils were observed in the borings.

Two methods can be considered for the excavation of the below water table residues, specifically land-based hydraulic excavators or dredges. Each is described in more detail in the following sections.

4.4.2 "Dry" Excavation with Hydraulic Excavators

Low ground pressure (LPG) long-armed hydraulic excavators, e.g., an LGP Gradall, can be employed to remove the soils which would be trucked to their final destination and/or stockpiled. Alternately the material could be placed on conveyors for removal from the excavation area. Use of a very wide bucket would remove large quantities quickly and allow shaping of the channel slopes.

A possible scenario for use of the LPG excavators would leave "plugs" at both ends of the proposed channel and the excavators would work between them. The plugs would need to be wide enough to allow passage of the excavators and trucks, if used. The plugs would contain the turbidity within the construction area. CDM anticipates that ground water would flow into the excavation rapidly.

An important consideration for the use of land-based equipment is the bearing capacity of the existing residues. As indicated previously, the residues are loose or soft in many instances. This aspect would need to be evaluated very carefully.

Use of land-based long-armed hydraulic excavators to excavate the residue has the advantage of allowing the excavated materials to be separated by soil type. If the residues have been deposited with concentrations of similar materials, i.e., large zones of fine sands, these could be identified, segregated and destined for specific uses. Also this method of excavation would not increase the moisture content of the silt and clay soils as much as a dredging operation. This could significantly increase the likelihood of reuse of some silt and clay residues for common fill.

4.4.3 "Wet" Excavation by Hydraulic Dredging

The use of small dredge to remove the residues and convey them to Lake 5 would be very efficient. The discharge pipe should be located just above the lake bottom to

minimize turbidity. The turbidity in Lake 5 can be minimized further by having the dredge cut a narrow entrance to the channel leaving a partial "curtain" across the end of the channel. Once inside the proposed channel, the dredge would excavate (hollow out) the interior of the channel, while discharging the cuttings to the lake through pipes leading through the narrow entrance. The partial curtain would not be removed until the interior excavation was complete.

An option with the dredging process is the use of a particle size classifier, such as a hydrocyclone, to separate fines from the sands. The fines stream could be discharged into Lake 5 while the sand stream could be pumped onshore for eventual use as fill after draining. The separation is not complete; some fines will remain in the sand stream and vice versa. This narrow range of particle sizes in the residues will make the separation less distinct so testing of the proposed equipment will be necessary to establish its effectiveness.

It is important to note that the moisture content of the excavated soils is increased by the dredging process.

4.4.4 Silt Curtains in Lake 5

Based on experience, both CDM's and published literature, we do not consider the dredging will cause significant turbidity beyond the zone of dredging activity. While use of a silt curtain may be considered, CDM recommends that it be evaluated carefully as the efficacy of silt curtains is debatable. Factors such as flow velocities in the lake, etc. must be considered. However, use of a silt curtain may be required by a permitting agency.

Section 5
Permitting Considerations

CDM conducted preliminary research regarding the permitting requirements to conduct the excavation or dredging on the site. The permitting information is organized by regulatory agency or entity.

5.1 Lee County

Lee County Department of Natural Resources was contacted. The County does not require permitting for the proposed onsite cut and fill activities. However, any groundwater wells that are in the construction zone would need to be properly abandoned and well abandonment permits from the County would be needed.

5.2 Florida Department of Environmental Protection

The FDEP Bureau of Mining and Minerals Regulation issues Environmental Resources Permits (ERP) for aggregate mines. The SFWMD issues ERPs for redevelopment projects, including former mine sites that are converted into residential/commercial use. FDEP will likely determine that the material excavated and/or dredged is incidental to the redevelopment and therefore, the ERP would be issued by the SFWMD. Therefore, no permits are needed from FDEP.

5.3 South Florida Water Management District

The SFWMD will require an Individual ERP for the management of surface water. It will likely take between 12 and 18 months to acquire the permit from the date of the pre-application meeting.

The SFWMD will require a dewatering water use permit if dewatering is used during excavation. Depending on the duration and maximum pumpage, either a General Permit (maximum of 10 MGD, 1800 MG total, less than one year duration) or an Individual Permit (no limitation on daily or total pumpage, greater than one year duration) may be needed. If dewatering is not needed (if excavation is conducted "in the wet"), the permit will not be needed.

An industrial water use permit for the dredging would not be required as this is not considered a consumptive use (water from the dredging operation is returned to the lake) and has little potential for creating a drawdown impact for other existing users or wetlands.

5.4 US Army Corps of Engineers

CDM contacted the Corps in the Fort Myers office. Pursuant to Section 404 of the Clean Water Act, a Department of the Army permit is required for any discharge of dredged or fill material into "waters of the United States." These waters include tidal waters, lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. A jurisdictional determination needs to

be conducted for the project site to identify if any areas on a plan view are classified as "waters of the United States." If the project involves filling jurisdictional areas, a Department of the Army permit may be required.

The Code of Federal Regulations 40 CFR Part 122.2 defines Waters of the United States or waters of the U.S. as:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

(b) All interstate waters, including interstate "wetlands."

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

  (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

  (2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

  (3) which are used or could be used for industrial purposes by industries in interstate commerce.

(d) All impoundments of waters otherwise defined as waters of the United States under this definition.

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition.

(f) The territorial sea.

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. [See Note 1 of this section.] Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

5.5 DRI

Although the Development of Regional Impact (DRI) is not needed for the excavation work, a DRI review will likely be required for the property prior to redevelopment.

Section 6
Conclusions and Recommendations

6.1 Feasibility of Proposed Site Development

Based on the additional explorations performed as part of this study, both the soil borings and the lake soundings, and on the laboratory sedimentation tests, CDM considers that the conceptual site plan is feasible. However, use of the excavated residues as fill for site development should be investigated carefully. The depth of Lake 5 would be reduced significantly, to approximately 10 to 12 feet, if all the excavated soils were deposited there.

Both of the excavation techniques that were presented, LGP excavators and dredges, have advantages. A combination of both methods would probably be most effective allowing the most usable fill while maintaining an overall low cost of excavation.

The sedimentation tests indicate that the mining residues, both the fine sands and the silts and clays, will settle relatively rapidly. Re-suspension of the deposited sediments is not anticipated to be problematic because the soils settle quickly. Placement of properly designed caps of sand and gravel-sized aggregates within the zone of wave action can be considered in order to minimize re-suspension of the very fine silt and clay residues.

Permitting the project includes an ERP from the SFWMD. The permit will likely take approximately 12 to 18 months to obtain. A jurisdictional determination from the Army Corps of Engineers needs to be conducted.

6.2 Recommendations for Additional Studies

Because the nature of the residues to be excavated and their potential reuse/disposal are critical factors for the planning of the proposed site development and ultimately for selection of the construction methods to be used, CDM recommends that the following work be undertaken in order to provide adequate data:

- Survey the site and the lake bottom to allow reliable estimation of cut and fill quantities.
- Establish the proposed control elevation for Lake 5.
- Perform test borings on a 400-foot grid throughout the proposed cut areas. The borings should extend to at least 5 feet below the proposed channel or lake bottom.
- A jurisdictional determination needs to be conducted for the project site to identify if any areas on a plan view are classified as "waters of the United States."

CDM also recommends that test borings be performed in the mined areas into which expansion of the development is being considered, i.e., along Alico Road, and on both sides of the 20-acres strip in the center of the site. The additional subsurface data coupled with the proposed excavation plans (including construction sequencing, excavation methods, costs, etc.) will provide information to prepare recommendations for any soil improvement work that may be required.

6.3 General Recommendations for Site Development

CDM recommends that a preliminary geotechnical exploration be performed for the proposed construction. Consideration should be given to use of the excavated soils for preloading areas where heavier structures will be built or where very loose soils have been encountered below the proposed construction. The preloading would be done in conjunction with the excavation work for the channel and lake.

FIGURES

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Figure 1-1
Alico Land Development, Inc.
2008 Aerial Photograph

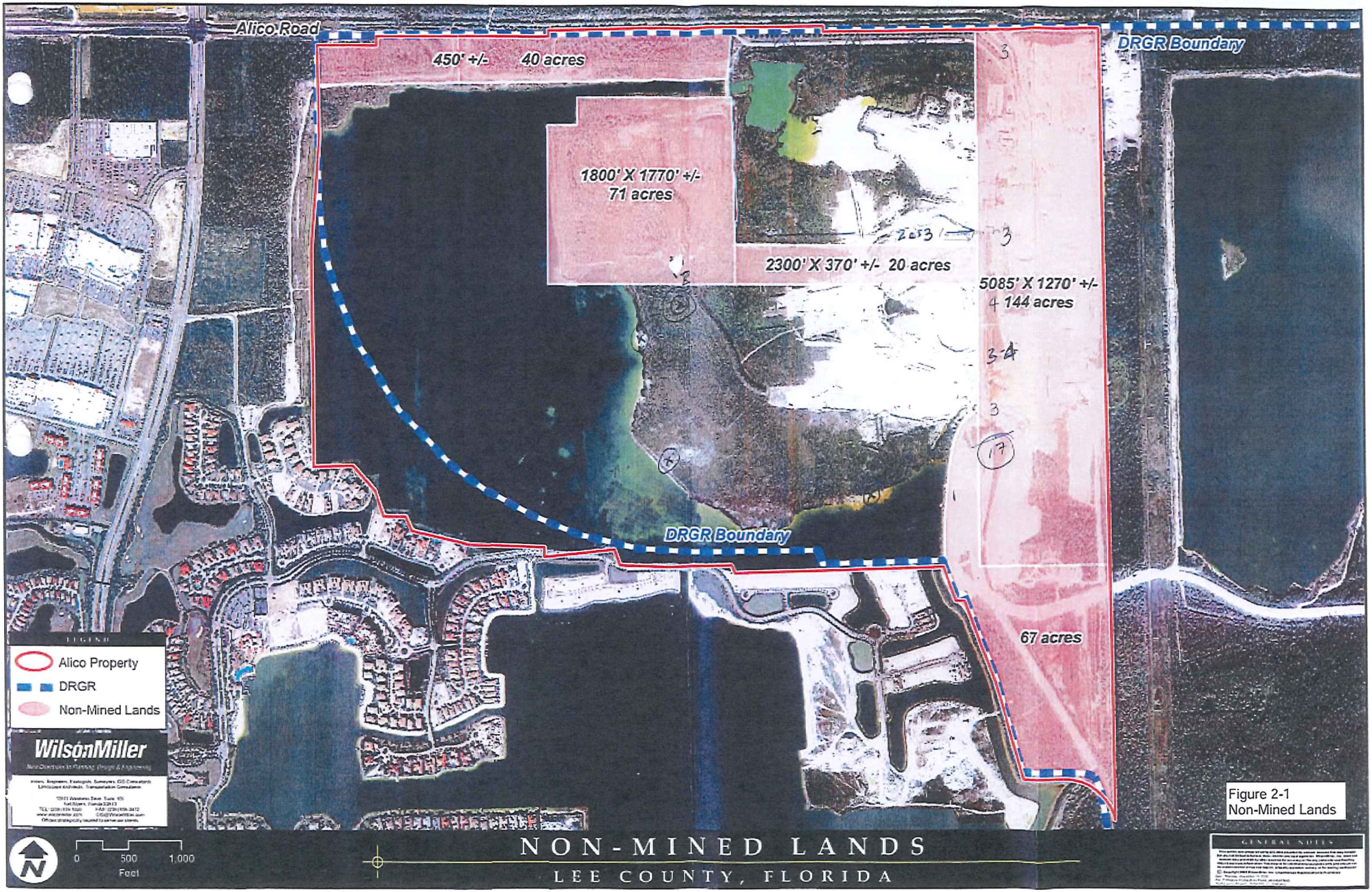

Figure 2-1
Non-Mined Lands

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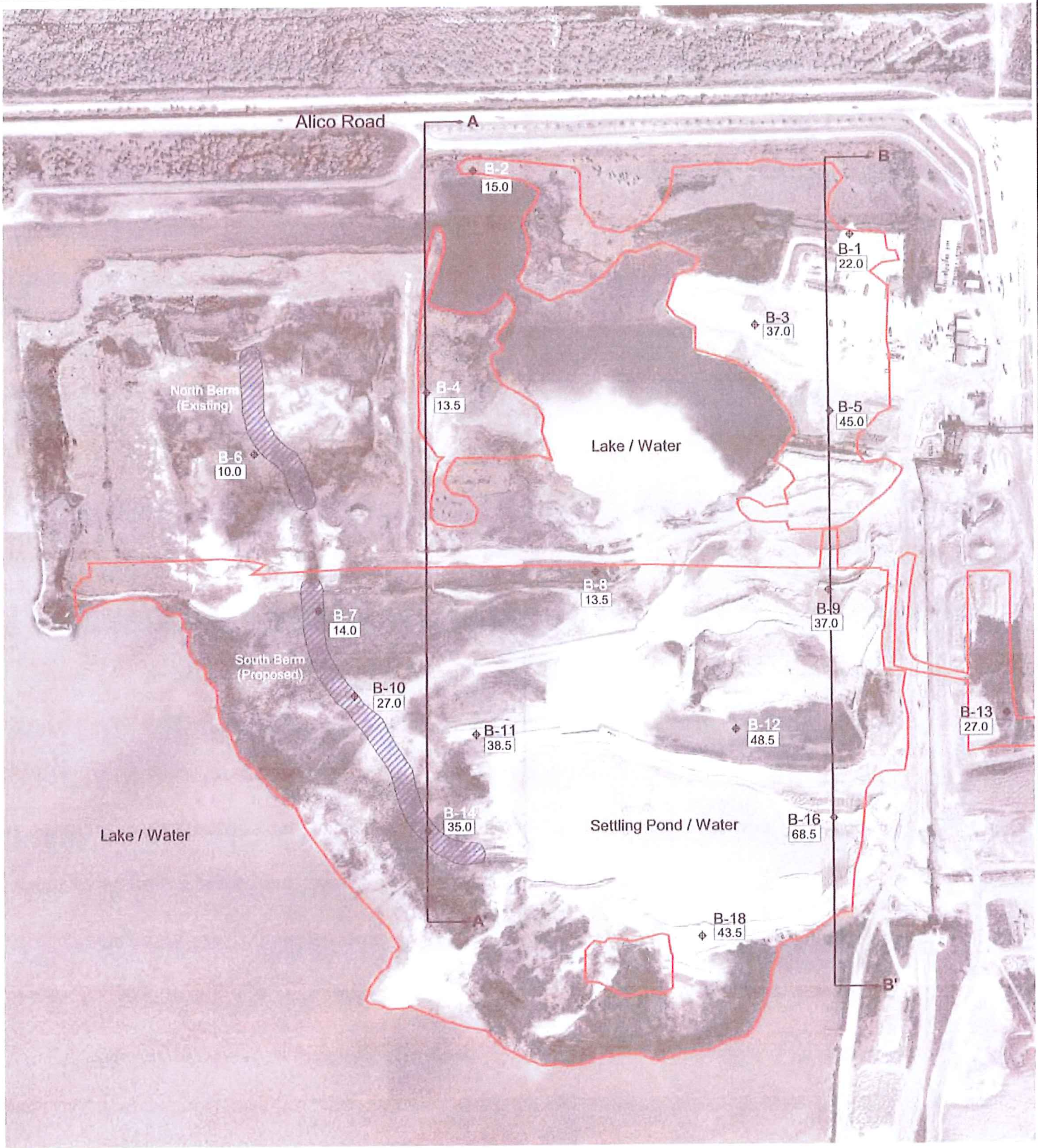
Figure 2-2
Alico Land Development, Inc.
1974 Aerial Photograph



LEGEND:

- B-20 Designation and Approximate Location of Test Boring
- 15.0 Thickness (ft.) of Fill at Test Boring Locations
- Approximate Limits of Filled Area
- Approximate Location of Existing and/or Proposed Berm
- A—A' Location and Orientation of Geologic Cross-Section shown on Figures 2-2 and 2-3.

Notes:

1. Base plan prepared from an aerial photo taken in February 1998
2. Test borings were drilled by Universal Engineering Sciences of Punta Gorda, FL between December 17 and 21, 2001.

Section 12, Alico Road
Lee County, Florida

300 0 300 600 Feet

Scale: 1" = 300'

N

Test Boring Location Plan

Figure 2-3

CDM

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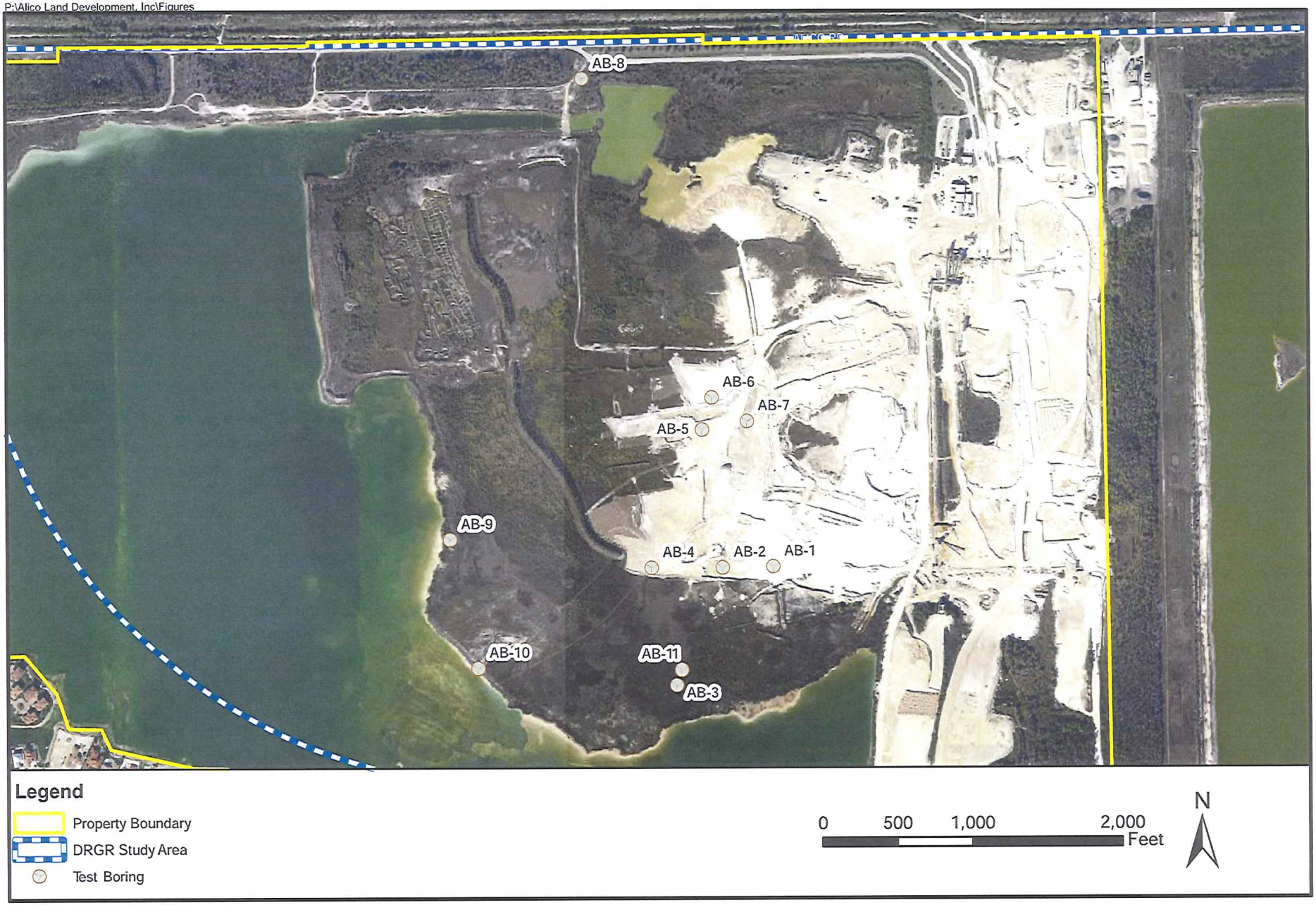

Figure 2-4
Alico Land Development, Inc.
2009 CDM Test Borings

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Figure 2-5
Alico Land Development, Inc.
Test Borings with Thickness of Silt/Clay Soils

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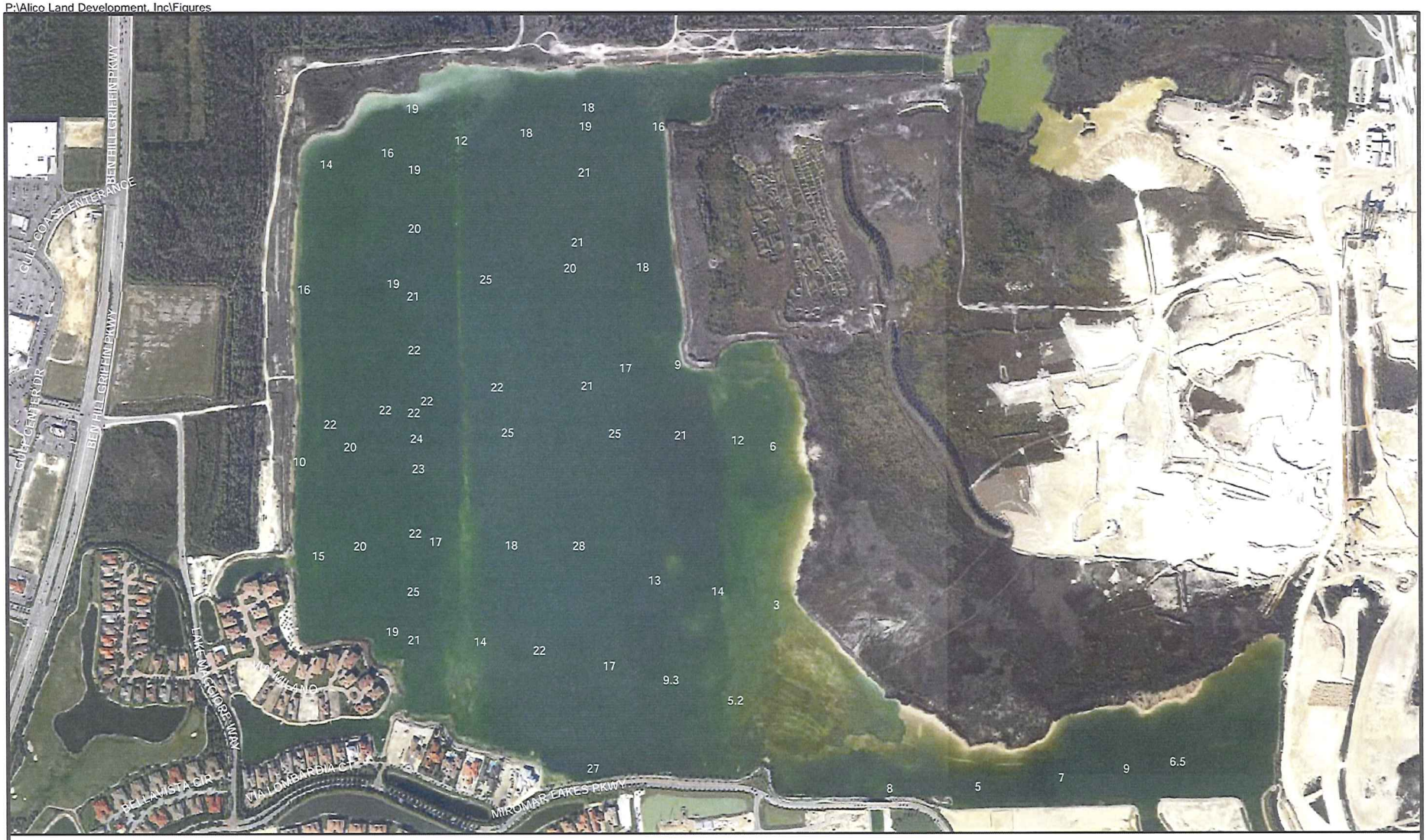

Legend

21 Depth in Feet

0 500 1,000 2,000 Feet

N

Figure 2-6
Alico Land Development, Inc.
Preliminary Bathymetric Survey

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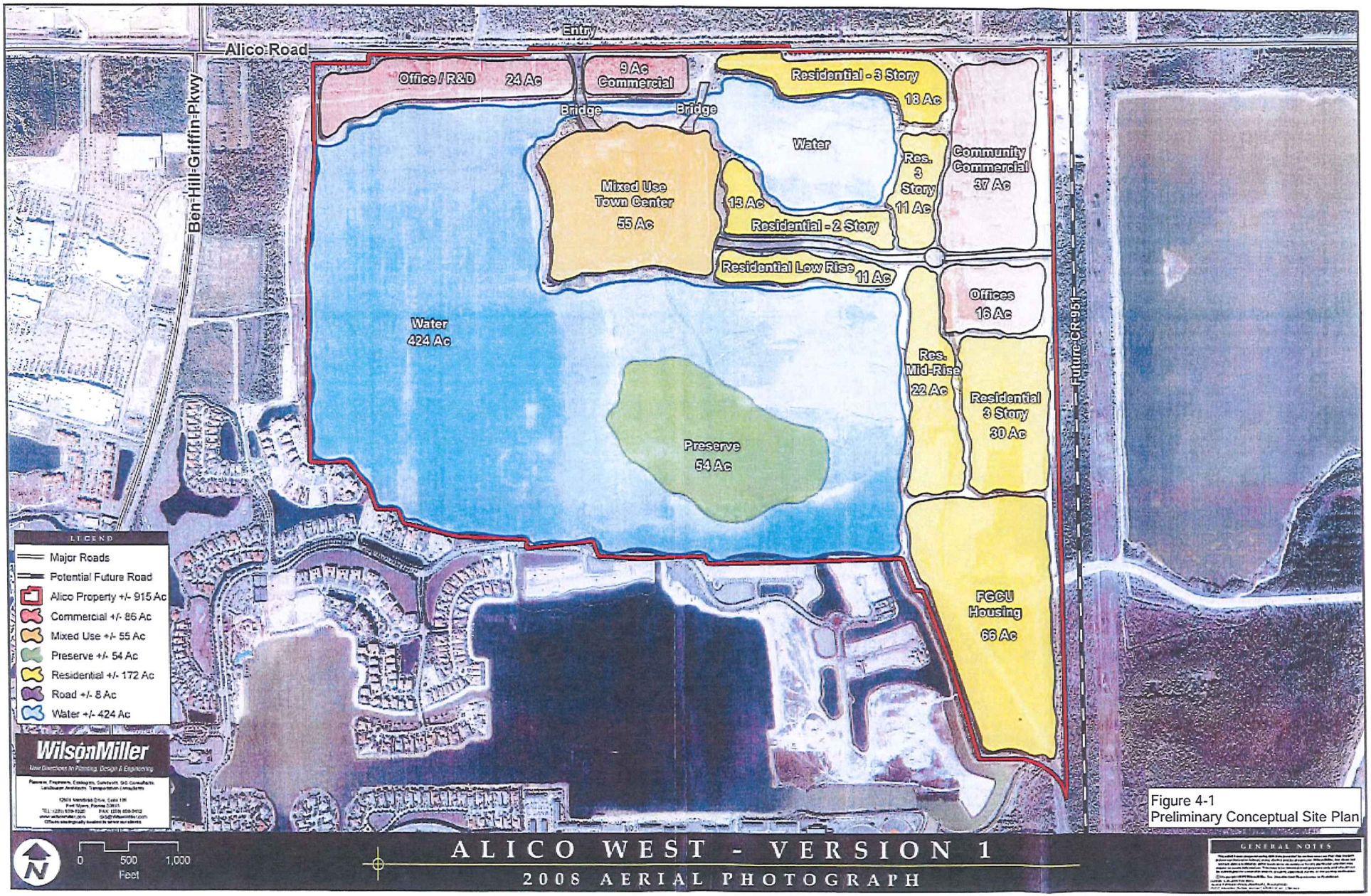

Figure 4-1
Preliminary Conceptual Site Plan

TABLES

Table 3-1 Residue Settlement Test Results

		Time of Settlement (hours)								
Boring ID and Sample Depth	**Soil Type**	**0.1**	**1**	**2**	**4**	**8**	**24**	**32**	**48**	**120**
control (lake water)		5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
AB-2 0-0.2 feet	clay/silt	>1000	450	350	170		26		21	15
AB-3 1 foot	clay/silt	>1000	500	360	180		28		21	11
AB-3 2 feet	clay/silt	>1000	330	230	110		20		17	7.6
AB-6 0-0.1 feet	clay/silt	>1000	450	250	170		26		16	10
AB-9 5-6 feet	clay/silt	>1000	400	280	150		25		24	12

Numeric values are Turbidity Nephelometric Tubidity Units (NTUs)

Table 4-1 Preliminary Estimates of Amounts of Excavation for Lakes and Channels

Lake	Volume of Soil to be Excavated (cu yd) (x 1,000)		
	Dry – above WT	Wet – below WT	Total
Lake 5 – channel around island preserve	420	1,600	2,000
North Lake	210	530	740
Both lakes	630	2,100	**2,700**

APPENDIX A

Boring Logs

Logs of Hand Auger Borings

Boring AB-1 **N26° 28.996' W81° 45.834'** **April 3, 2009**

Depth (ft)	Soil Description
0 – 6	Light tan very fine sand, becomes slightly coarser with increasing depth
4½	Water table

Boring AB-2 **N26° 28.995' W81° 45.896'** **April 3, 2009**

Depth (ft)	Soil Description
0 – ¼	Gray-brown plastic silt, trace very fine organics
¼ - 1	Tan fine sand, trace to little silt, trace silt nodules (½ -1 inch)
1 – 9	Gray-brown fine sand, trace medium sand, trace shell fragments, trace silt, 1-inch silt nodules at 2 feet
2½ - 3	Water table

Boring AB-3 **N26° 28.866' W81° 45.953'** **April 3, 2009**

Depth (ft)	Soil Description
0 – 2¾	Tan plastic silt, trace organics
2¾ - 3½	Tan fine sand, increasingly fine with increasing depth
3½ - 4¼	Tan fine sand, little to some silt, trace organics
	Water table not encountered

Boring was located in high grasses on south side of 'delta'. (Could not drive to boring.)

Boring AB-4 **N26° 28.995' W81° 45.893'** **April 3, 2009**

Depth (ft)	Soil Description
0 – ¼	Tan plastic silt
¼ - 1	Tan fine sand, trace to little silt, seams of plastic silt
1 - 3½	Tan fine sand, little to some silt
3½ - 4	Tan fine sand, trace medium sand, trace silt
½	Water table

Boring was located inside an approximately 7-foot deep hole. The soil within a 3 to 4-foot radius around the borehole sloughed into the hole, even with casing.

Boring AB-5 **N26° 29.147' W81° 45.920'** **April 3, 2009**

Depth (ft)	Soil Description
0 – 8½	Tan fine sand, trace medium sand, becomes finer with trace silt with increasing depth
3	Water table

Boring was located in a low area adjacent to a small pond. Parts of the ground surface were blanketed with a ½-inch thick layer of plastic silt.

Boring AB-6 **N26° 29.182' W81° 45.908'** **April 3, 2009**

Depth (ft)	Soil Description
0 – ½ inch	Tan plastic silt
½ in – 3	Light brown fine sand
2½	Water table

Boring was located in a low area. The surficial layer of plastic silt could be lifted intact from the underlying sand (pealed).

Boring AB-7 **N26° 29.156' W81° 45.865'** **April 3, 2009**

Depth (ft)	Soil Description
0 – ½ inch	Tan plastic silt (dry, stiff)
½ in – 3½	Tan fine sand
3½ - 8	Tan fine to coarse sand
4	Water table

Boring AB-8 **N26° 29.5332' W81° 46.0649'** **May 7, 2009**

0 – 1	Tan very fine sand, dry
1 – 2	White to tan very fine to fine sand, dry
2 – 4	Light brown very fine sand, moist
4 – 5¼	Light brown fine sand, wet
3¾	Water table

Boring AB-9 **N26° 29.0268' W81° 46.2299'** **May 7, 2009**

0 – 1	Tan plastic silt, dry
1 – 2	Tan plastic silt, wet
2 – 3	Tan with orange mottling plastic silt, dry
3 – 4	Tan plastic silt, some fine sand, dry
4 – 5	Gray silt, dry, with moist pocket @4¾ feet
5 – 8	Gray brown very plastic silt, wet
3¾	Water table

Boring AB-10 **N26° 28.8850' W81° 46.1962'** **May 7, 2009**

0 – 2	Tan very fine sand, little to some silt, dry
2 – 3	Tan very fine sand, little silt, dry
3 – 4	Light brown very fine sand, little silt, dry
4 – 6	Light brown fine sand, trace silt, moist
6 – 7¾	Light brown gray fine sand, wet
5½	Water table

Boring AB-11 **N26° 28.8827' W81° 45.9470'** **May 7, 2009**

0 – 1	Tan plastic silt, dry
1 – 3	Tan with orange mottling plastic silt, dry
3 – 5	Light brown very fine sand, dry
5 – 6	Light brown fine sand, moist
6 - 7¾	Light brown fine sand, wet
5¾	Water table